



Back to School 2021-2022 With COVID-19 September 30, 2021

Jennifer Morse, MD, MPH, FAAFP

Medical Director

CMDHD/MMDHD/DHD#10

This meeting is for School and Health Department Staff

We have limited time to cover all our topics. The slides and recordings will be available on our websites within 1-3 days.

<https://www.dhd10.org/coronavirus/school-guidance/>

<https://www.mmdhd.org/covid-schools/>

<https://www.cmdhd.org/novelschools>

If you have questions, please send them to:

For Roscommon, Osceola, Clare, Gladwin, Arenac, Isabella Counties:

info@cmdhd.org

For Missaukee, Crawford, Kalkaska, Wexford, Lake, Mason, Manistee, Oceana, Newaygo, Mecosta Counties:

info@dhd10.org

For Montcalm, Gratiot, Clinton Counties:

<https://www.mmdhd.org/contact/>



Please make sure the information shared today is passed along to others who may need it, such as school COVID-19 liaisons, school secretaries, school nurses, etc.

Thank you!

Association Between K–12 School Mask Policies and School-Associated COVID-19 Outbreaks — Maricopa and Pima Counties, Arizona, July–August 2021

Mask requirements in K-12 schools limited COVID-19 outbreaks

Schools without mask requirements were...



3.5x
more likely to have COVID-19 outbreaks...

Compared with schools that started the year with mask requirements



* K–12 public noncharter schools in Maricopa and Pima Counties, AZ— July–August, 2021

bit.ly/MMWR92421

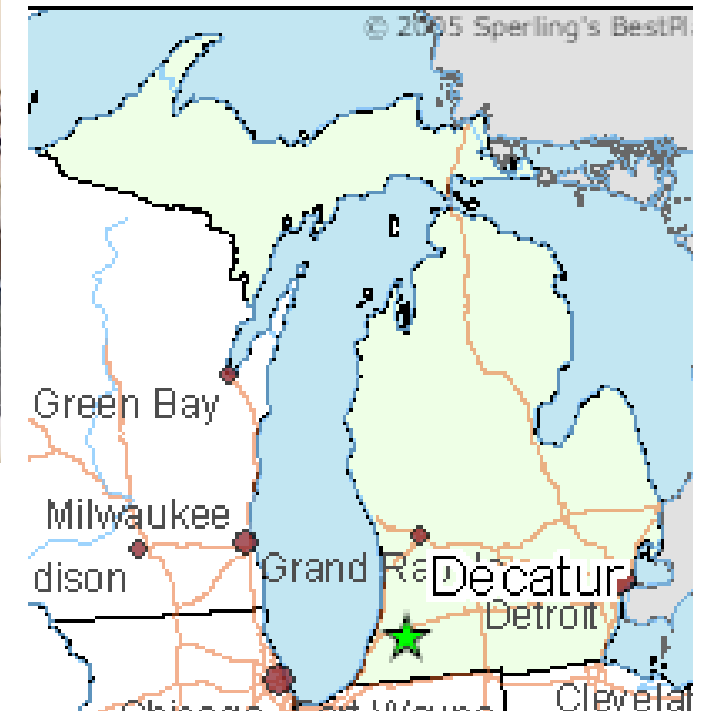


MMWR

- ▶ During July 15–August 31, 2021, 999 schools in Maricopa and Pima Counties, Arizona were analyzed
 - ▶ A total of 191 school-associated outbreaks occurred
 - ▶ 16 (8.4%) were in schools with **early** mask requirements (an early mask requirement was one that was in place when the school year began)
 - ▶ 62 (32.5%) were in schools with **late** mask requirements (a late mask requirement was one that was implemented any time after school began)
 - ▶ 113 (59.2%) in were schools **without any** mask requirement
- ▶ After adjusting for potential confounders, the **odds of a school-associated COVID-19 outbreak in schools without a mask requirement were 3.5 times higher** than those in schools with an early mask requirement

Student Death in Michigan

- ▶ Decatur Public Schools high school senior Giovanni Peña, 18, died Thursday, September 23rd from complications of COVID-19 one week after symptom onset
- ▶ Unvaccinated but was planning to get vaccinated
- ▶ On football and wrestling team
- ▶ Planned to go to college for engineering



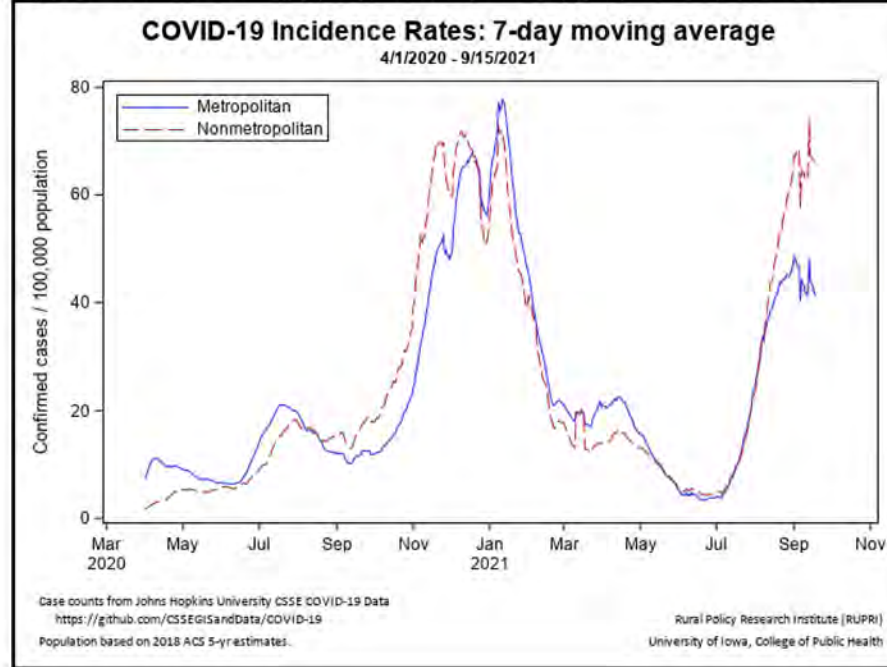
<https://wwmt.com/news/local/health-department-pushes-mask-mandate-after-decatur-high-school-senior-dies-from-covid-19>

<https://wwmt.com/news/local/family-and-friends-remember-decatur-high-school-senior-that-died-from-covid-19>

COVID-19 Cases and Deaths, Metropolitan and Nonmetropolitan Counties Over Time

- ▶ Rural Americans are dying of Covid at more than twice the rate of their urban counterparts
- ▶ Since the pandemic began, about 1 in 434 rural Americans have died from Covid, compared with roughly 1 in 513 urban Americans

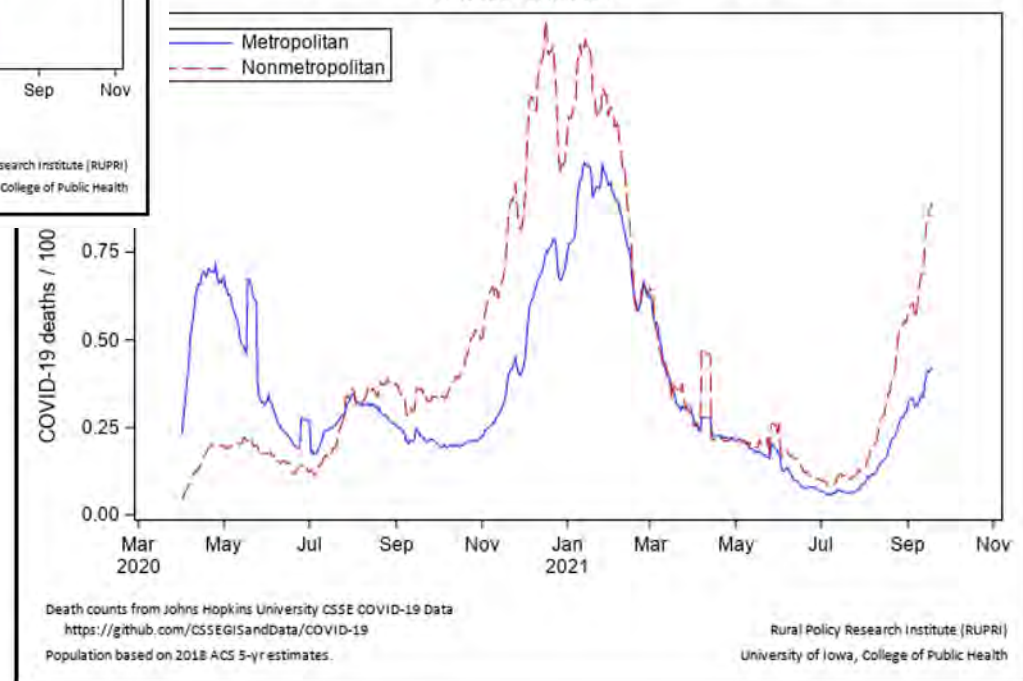
Figure 1. COVID-19 Metropolitan and Nonmetropolitan Incidence Rates



COVID-19 Metropolitan and Nonmetropolitan Mortality Rates

COVID-19 Mortality Rates: 7-day moving average

4/1/2020 - 9/15/2021



[https://rupri-public-health.uiowa.edu/publications/policybriefs/2020/COVID%20Longitudinal%20Data.pdf](https://rupri.public-health.uiowa.edu/publications/policybriefs/2020/COVID%20Longitudinal%20Data.pdf)



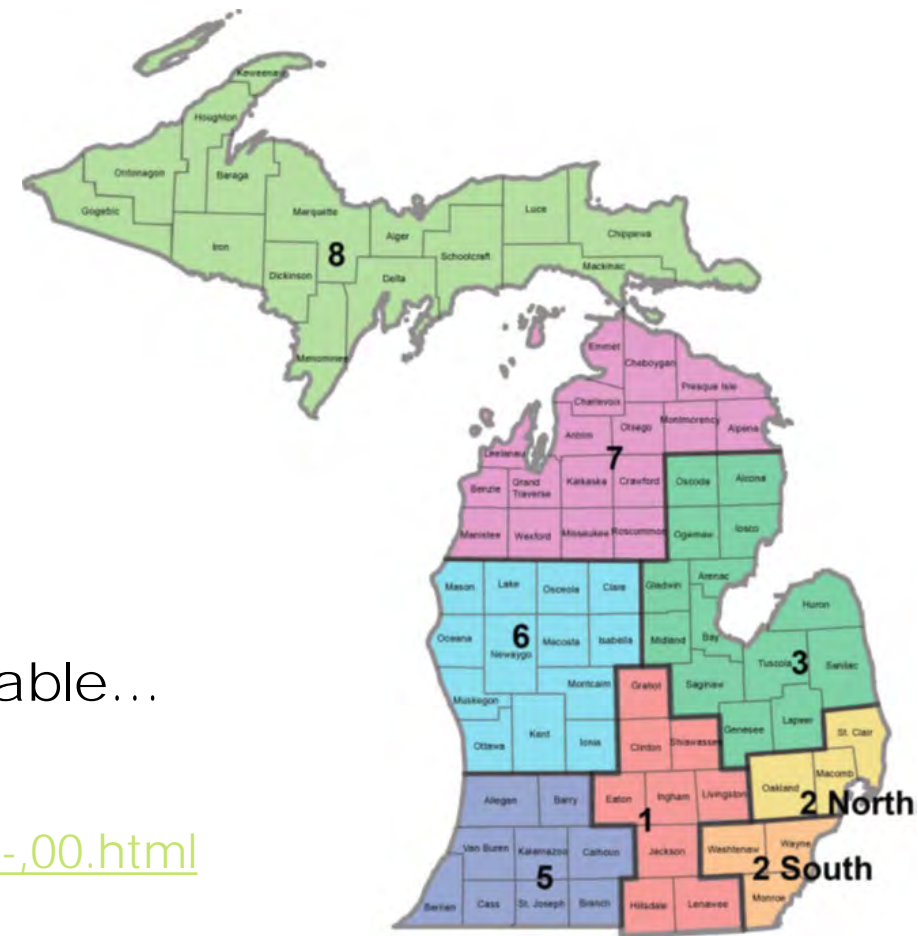
See the most up to date data at
<https://www.mistartmap.info/>

(we will not be doing data table any longer)

COVID-19 Pediatric Hospitalizations 09/29/2021

Updated Monday, Wednesday & Friday

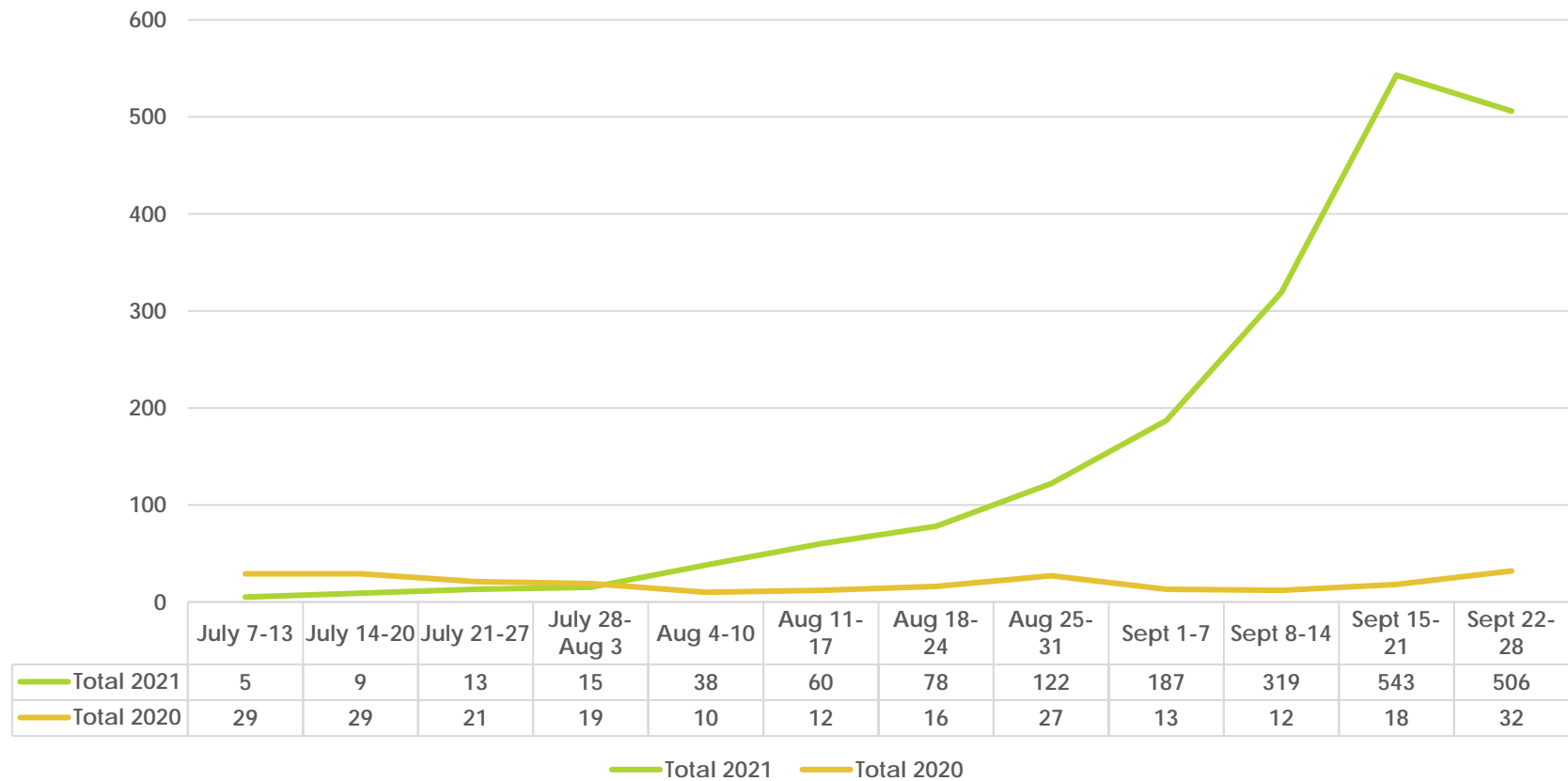
HCC Region	Region 1	Region 3	Region 6	Region 7
Hospitalized Peds Confirmed/Suspected	0	2	9	0
Hospitalized Ped Confirmed-Positive	0	2	7	0



Still working to find county by county data that is more reliable...

<https://www.michigan.gov/coronavirus/0,9753,7-406-98159-523641--,00.html>

19 Counties of MMDHD/DHD#10/CMDHD COVID Cases 5-18 yrs. of age, weekly, 2020 compared to 2021



County by County Comparisons COVID Cases 5-18 yrs. of age, weekly, 2020 compared to 2021

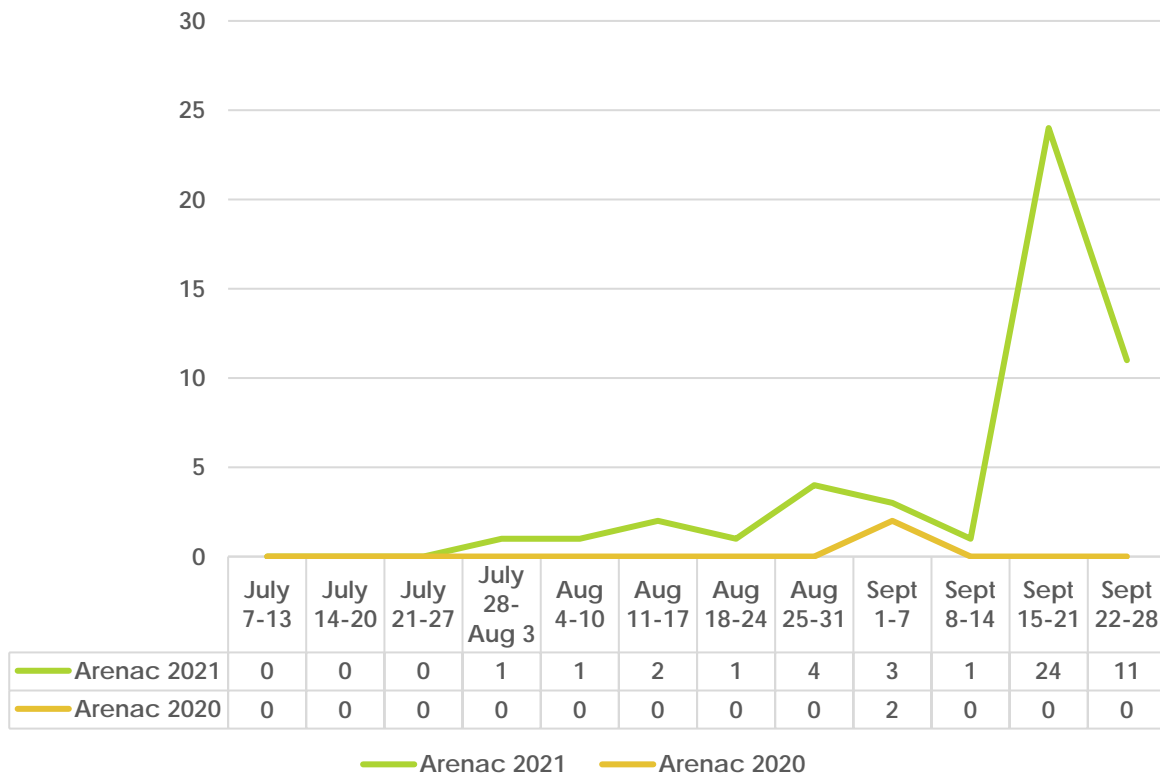
NOTE: The values on the vertical (y) axis are different for each county due to different numbers of cases

— IS 2021

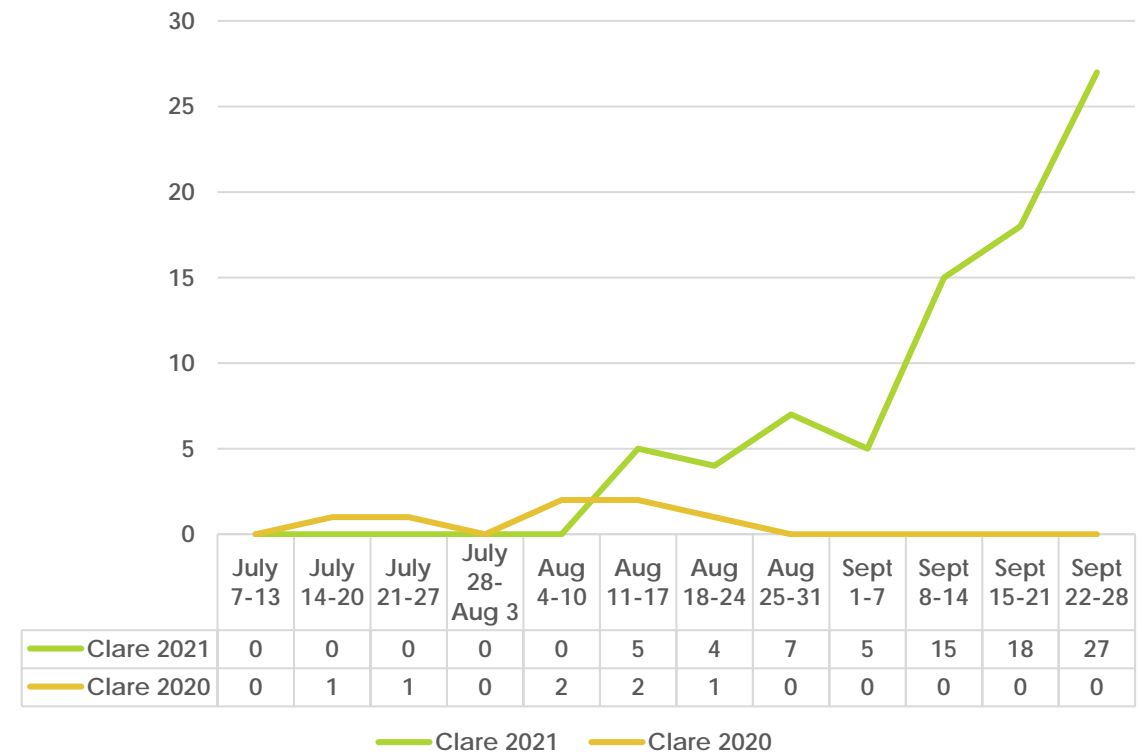
— IS 2020

COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

Arenac

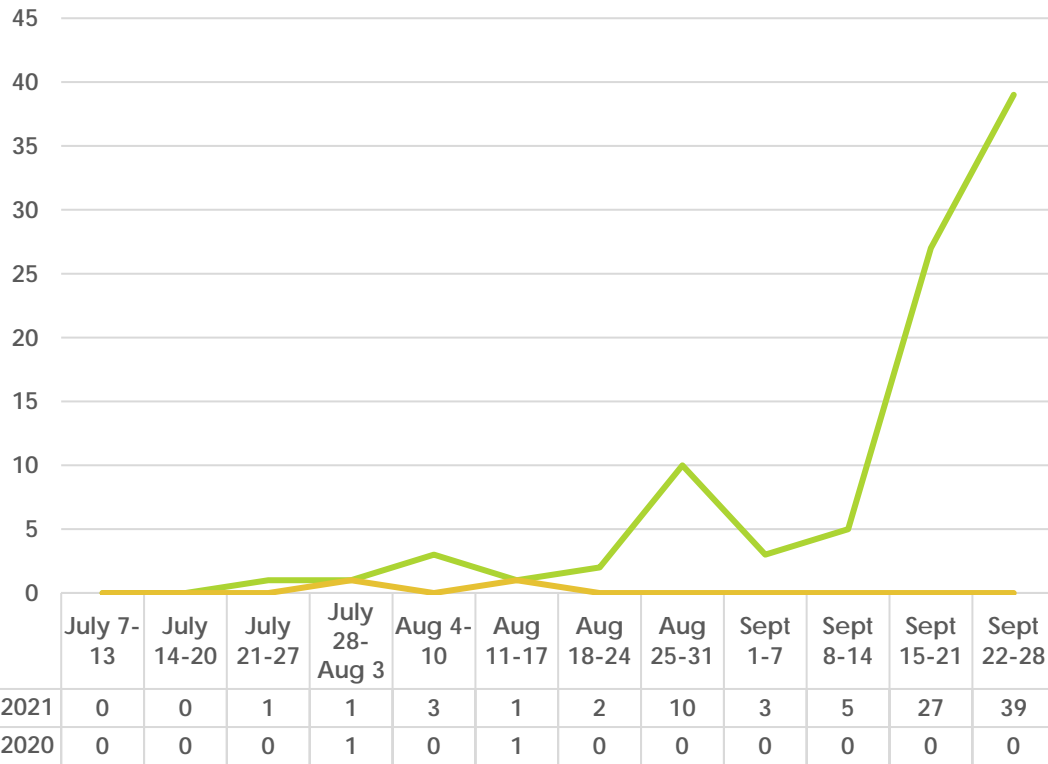


Clare



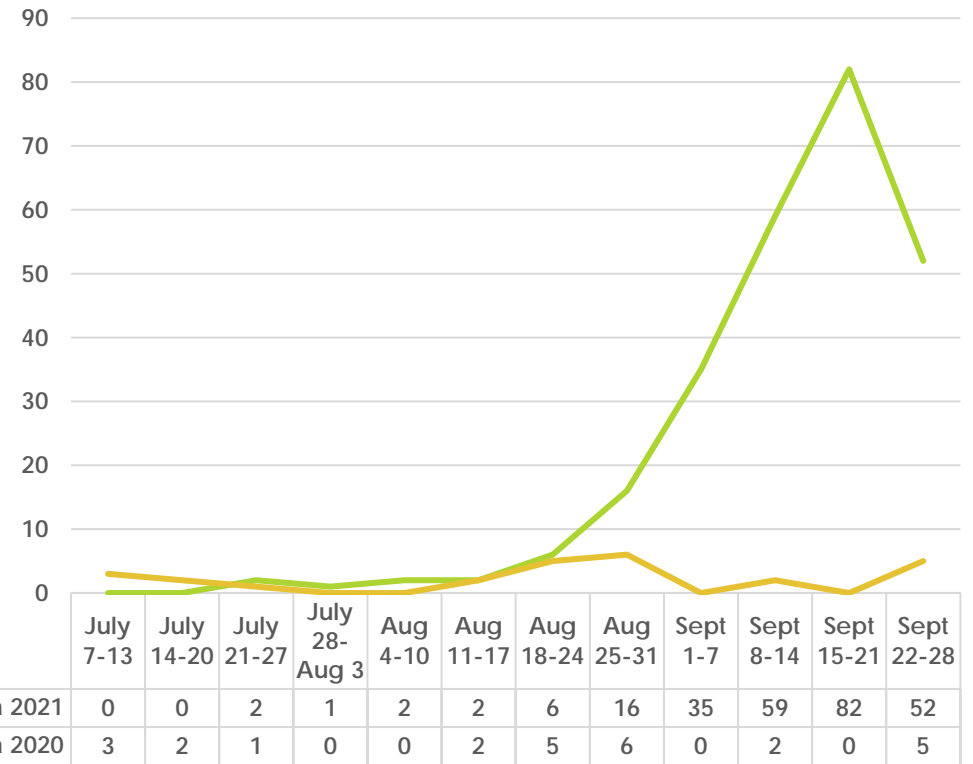
COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

Gladwin



— Gladwin 2021 — Gladwin 2020

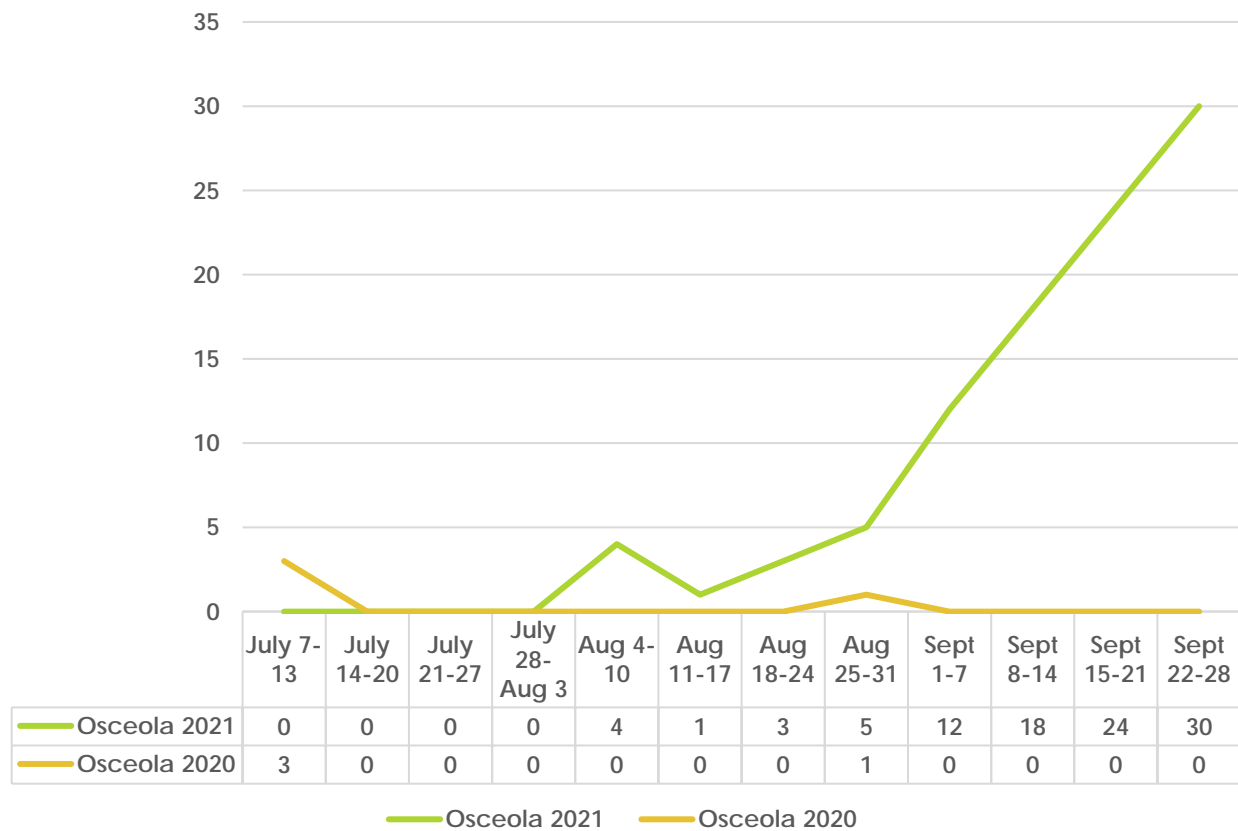
Isabella



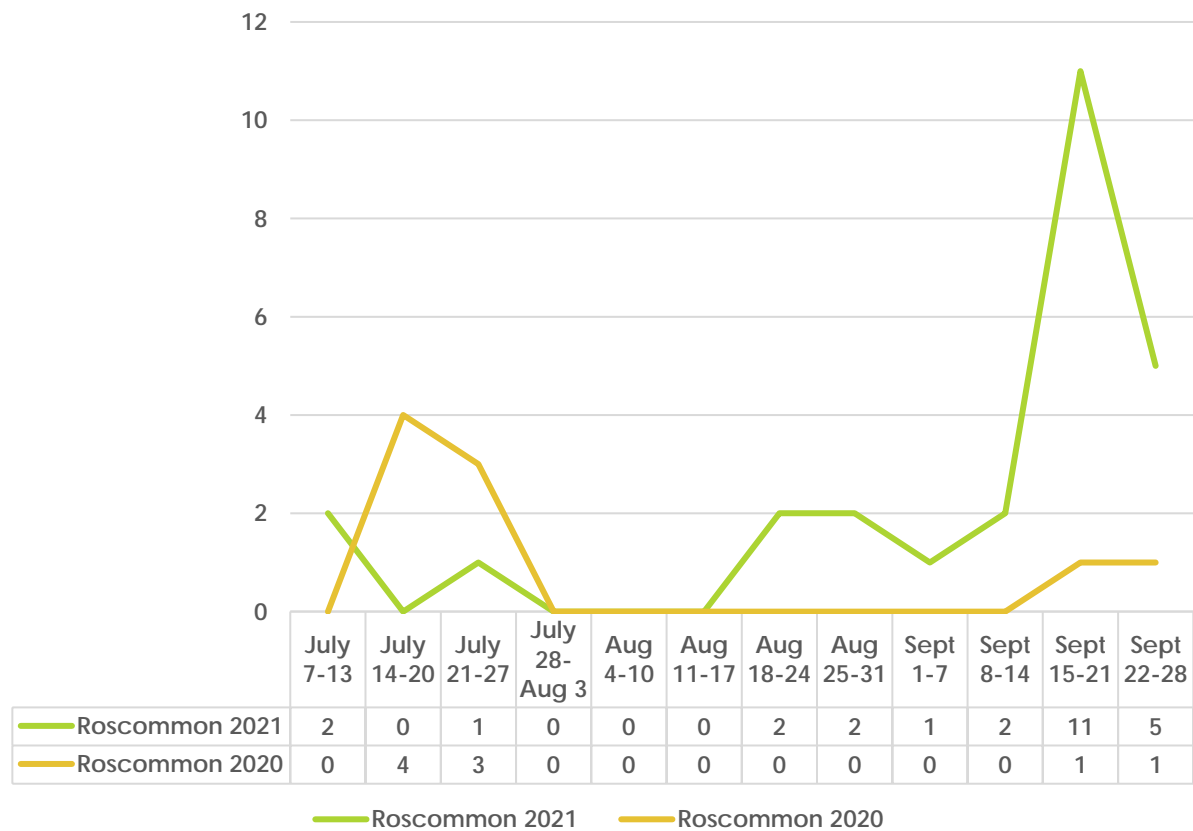
— Isabella 2021 — Isabella 2020

COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

Osceola

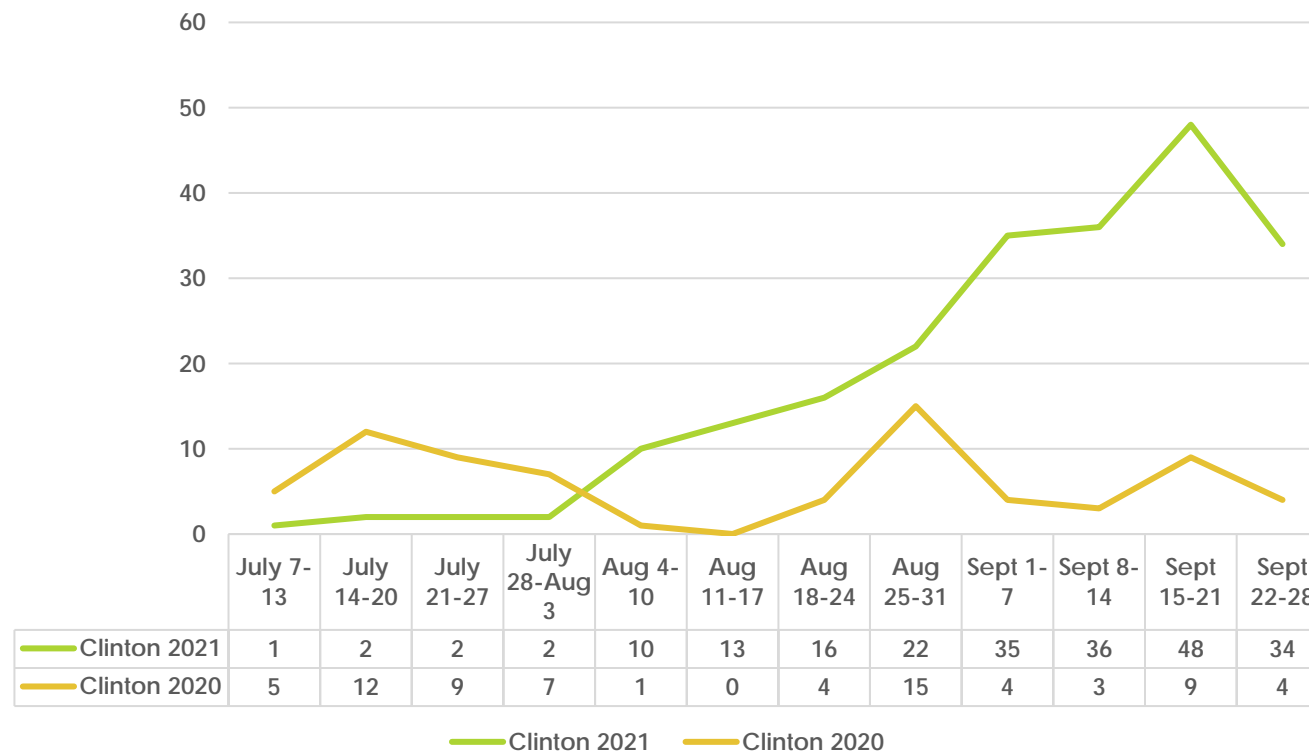


Roscommon



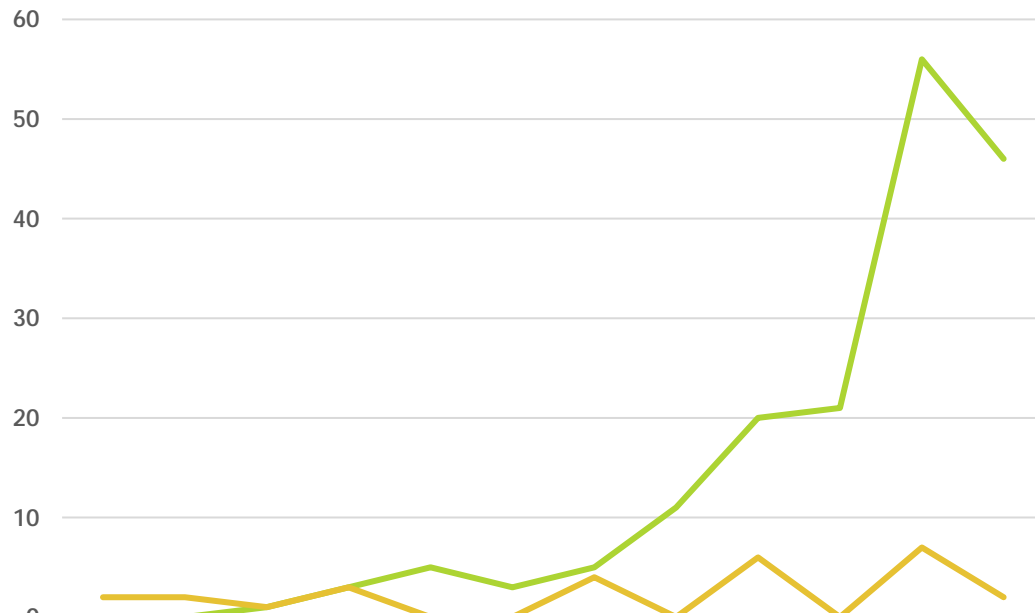
COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

Clinton



COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

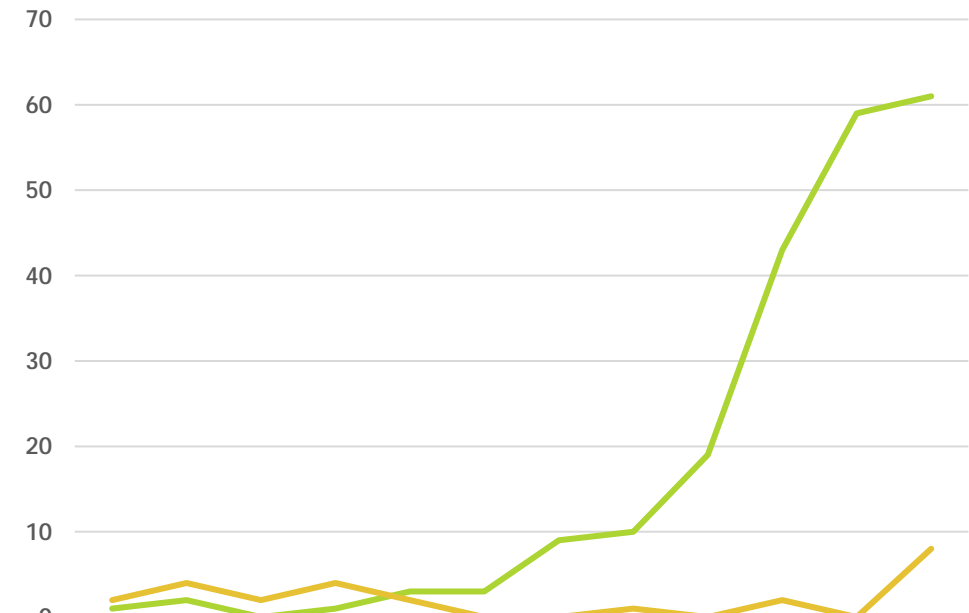
Gratiot



	July 7-13	July 14-20	July 21-27	July 28-Aug 3	Aug 4-10	Aug 11-17	Aug 18-24	Aug 25-31	Sept 1-7	Sept 8-14	Sept 15-21	Sept 22-28
Gratiot 2021	0	0	1	3	5	3	5	11	20	21	56	46
Gratiot 2020	2	2	1	3	0	0	4	0	6	0	7	2

Gratiot 2021 Gratiot 2020

Montcalm

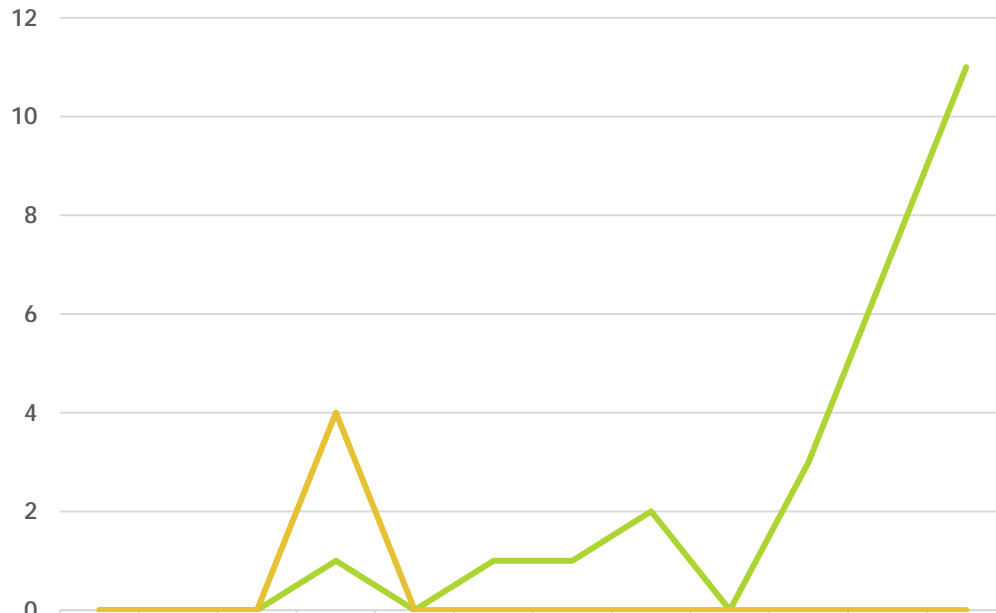


	July 7-13	July 14-20	July 21-27	July 28-Aug 3	Aug 4-10	Aug 11-17	Aug 18-24	Aug 25-31	Sept 1-7	Sept 8-14	Sept 15-21	Sept 22-28
Montcalm 2021	1	2	0	1	3	3	9	10	19	43	59	61
Montcalm 2020	2	4	2	4	2	0	0	1	0	2	0	8

Montcalm 2021 Montcalm 2020

COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

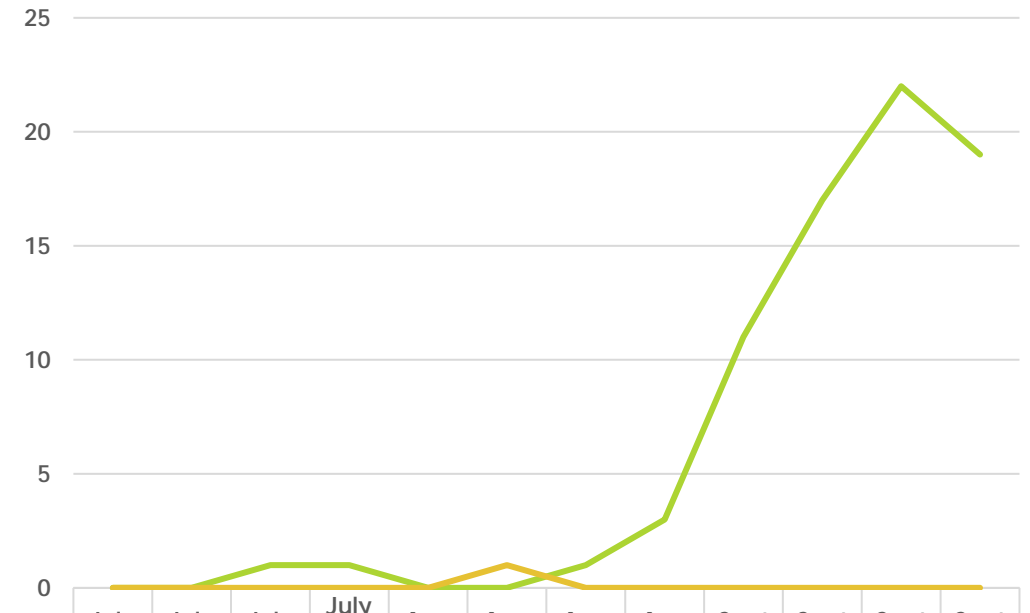
Crawford



	July 7-13	July 14-20	July 21-27	July 28-Aug 3	Aug 4-10	Aug 11-17	Aug 18-24	Aug 25-31	Sept 1-7	Sept 8-14	Sept 15-21	Sept 22-28
Crawford 2021	0	0	0	1	0	1	1	2	0	3	7	11
Crawford 2020	0	0	0	4	0	0	0	0	0	0	0	0

— Crawford 2021 — Crawford 2020

Kalkaska

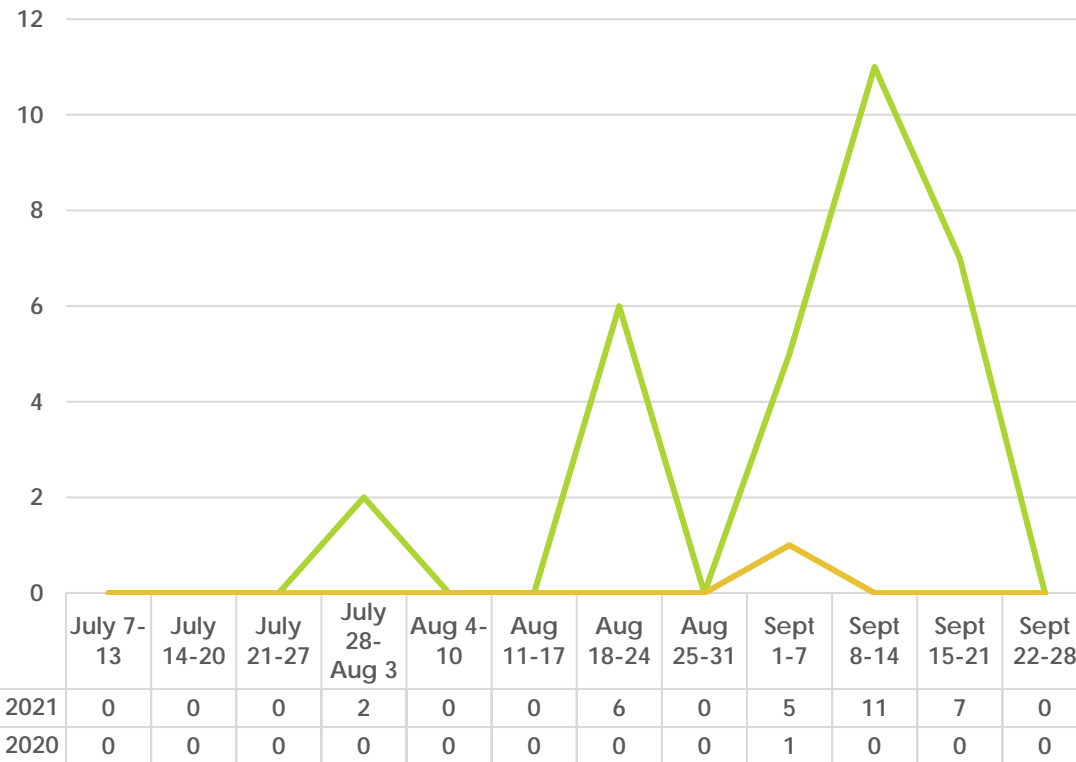


	July 7-13	July 14-20	July 21-27	July 28-Aug 3	Aug 4-10	Aug 11-17	Aug 18-24	Aug 25-31	Sept 1-7	Sept 8-14	Sept 15-21	Sept 22-28
Kalkaska 2021	0	0	1	1	0	0	1	3	11	17	22	19
Kalkaska 2020	0	0	0	0	0	1	0	0	0	0	0	0

— Kalkaska 2021 — Kalkaska 2020

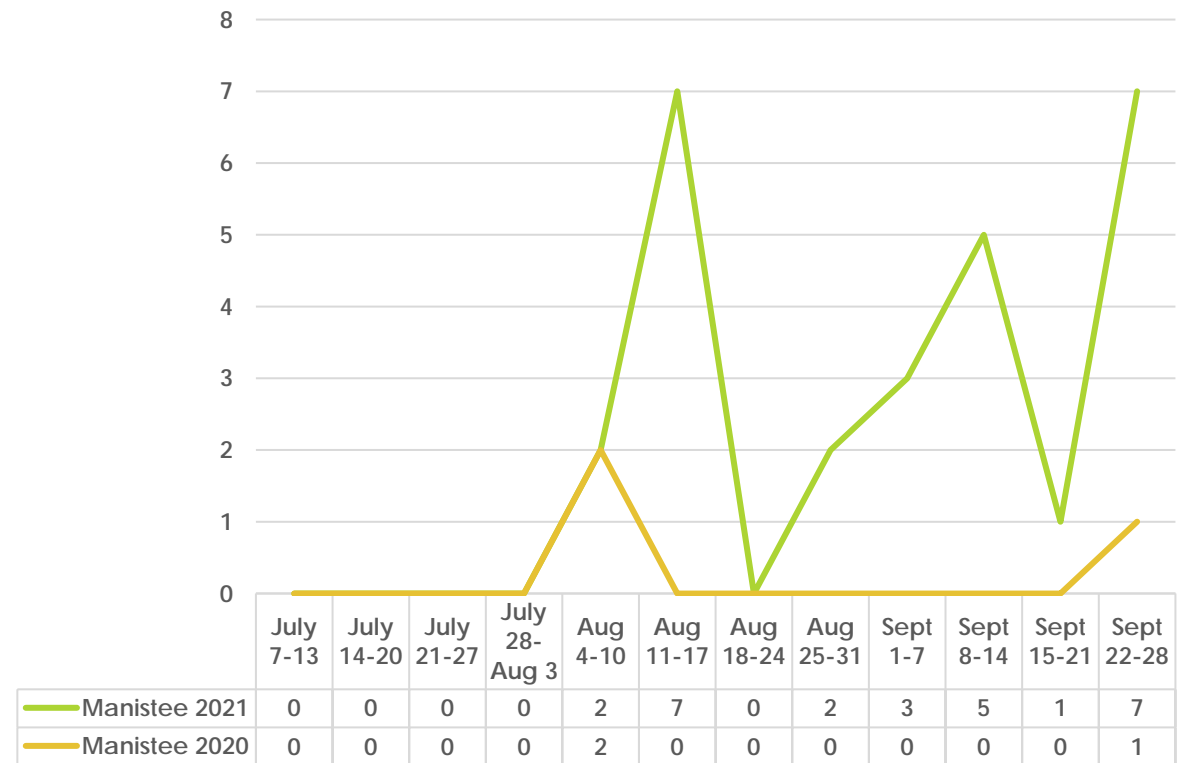
COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

Lake



Lake 2021 Lake 2020

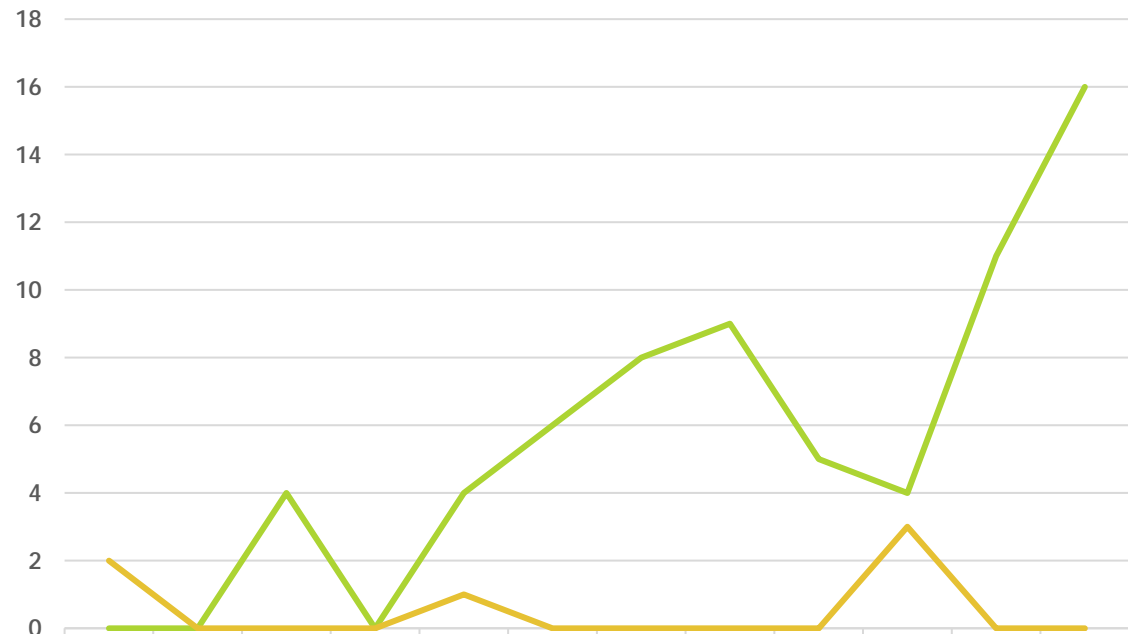
Manistee



Manistee 2021 Manistee 2020

COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

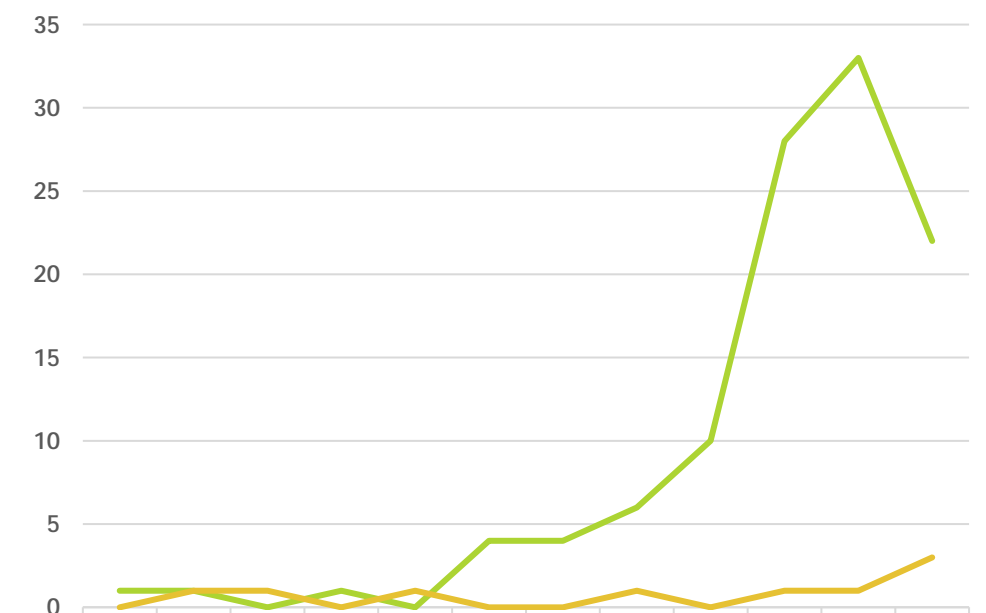
Mason



	July 7-13	July 14-20	July 21-27	July 28-Aug 3	Aug 4-10	Aug 11-17	Aug 18-24	Aug 25-31	Sept 1-7	Sept 8-14	Sept 15-21	Sept 22-28
Mason 2021	0	0	4	0	4	6	8	9	5	4	11	16
Mason 2020	2	0	0	0	1	0	0	0	0	3	0	0

Mason 2021 Mason 2020

Mecosta

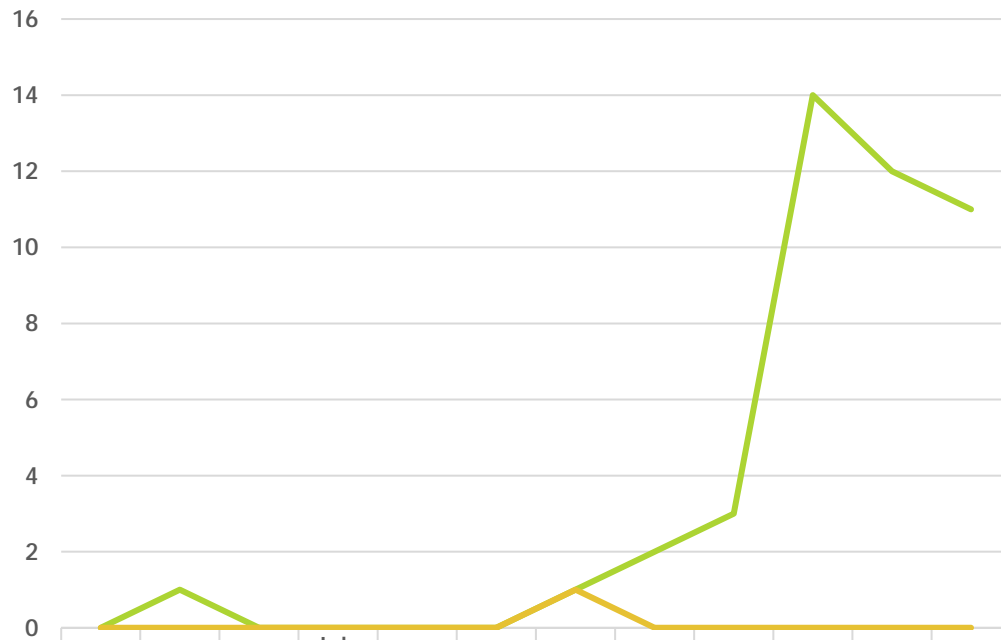


	July 7-13	July 14-20	July 21-27	July 28-Aug 3	Aug 4-10	Aug 11-17	Aug 18-24	Aug 25-31	Sept 1-7	Sept 8-14	Sept 15-21	Sept 22-28
Mecosta 2021	1	1	0	1	0	4	4	6	10	28	33	22
Mecosta 2020	0	1	1	0	1	0	0	1	0	1	1	3

Mecosta 2021 Mecosta 2020

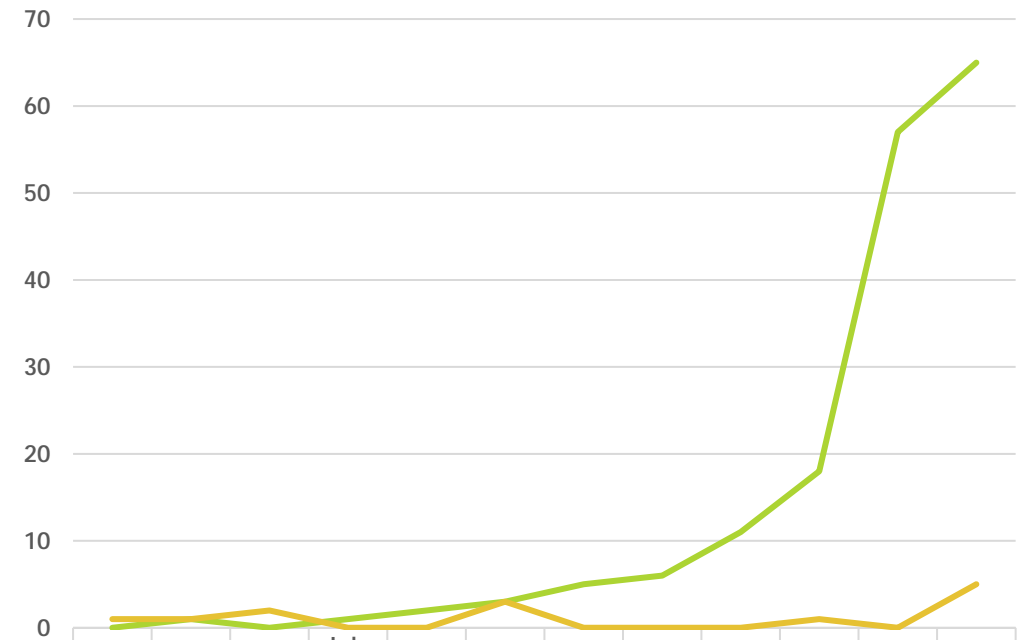
COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

Missaukee



Missaukee 2021 Missaukee 2020

Newaygo



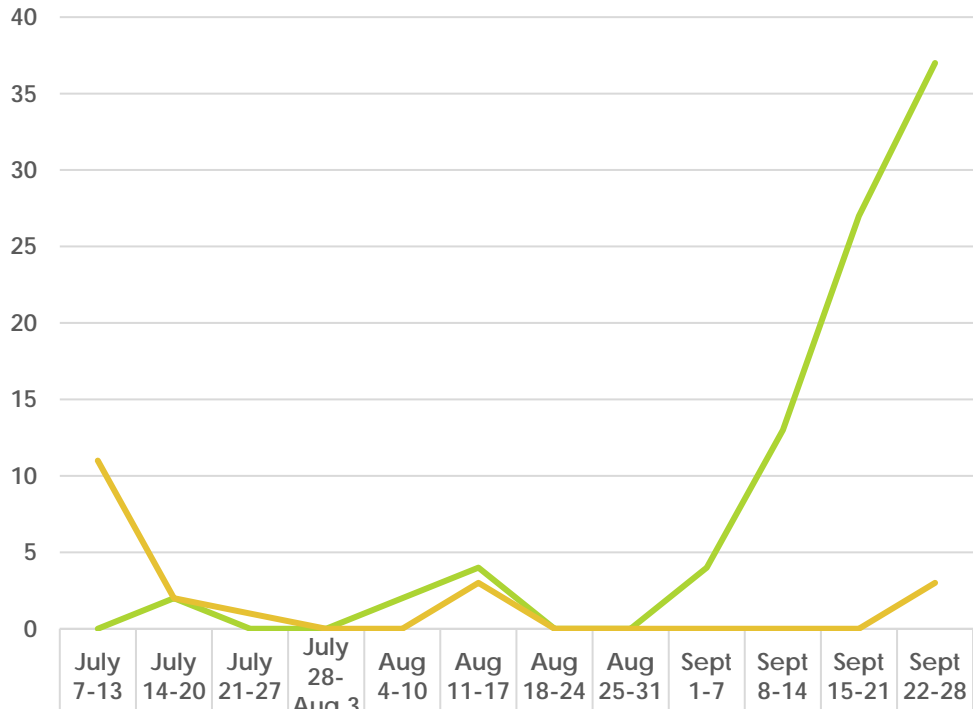
Newaygo 2021 Newaygo 2020

Missaukee 2021	0	1	0	0	0	0	1	2	3	14	12	11
Missaukee 2020	0	0	0	0	0	0	1	0	0	0	0	0

Newaygo 2021	0	1	0	1	2	3	5	6	11	18	57	65
Newaygo 2020	1	1	2	0	0	3	0	0	0	1	0	5

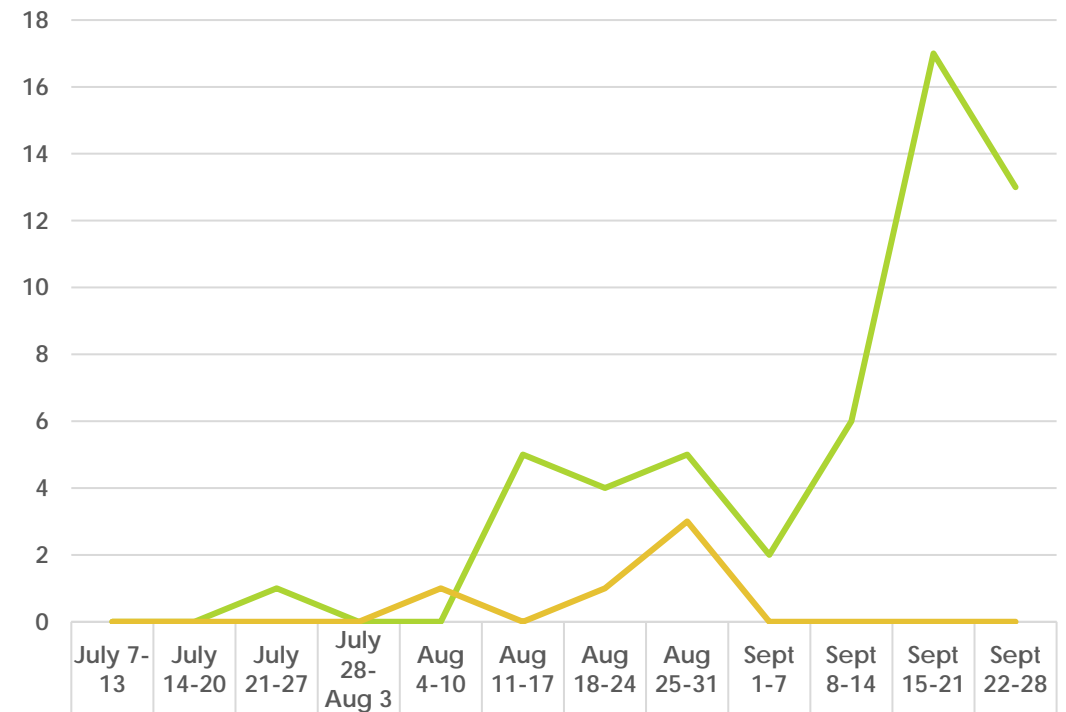
COVID Cases 5-18 yrs. of age, weekly 2020 compared to 2021

Oceana



Oceana 2021 Oceana 2020

Wexford



Wexford 2021 Wexford 2020



MI COVID Response Data and Modeling Update-September 28, 2021

https://www.michigan.gov/coronavirus/0,9753,7-406-98163_98173_105123---,00.html

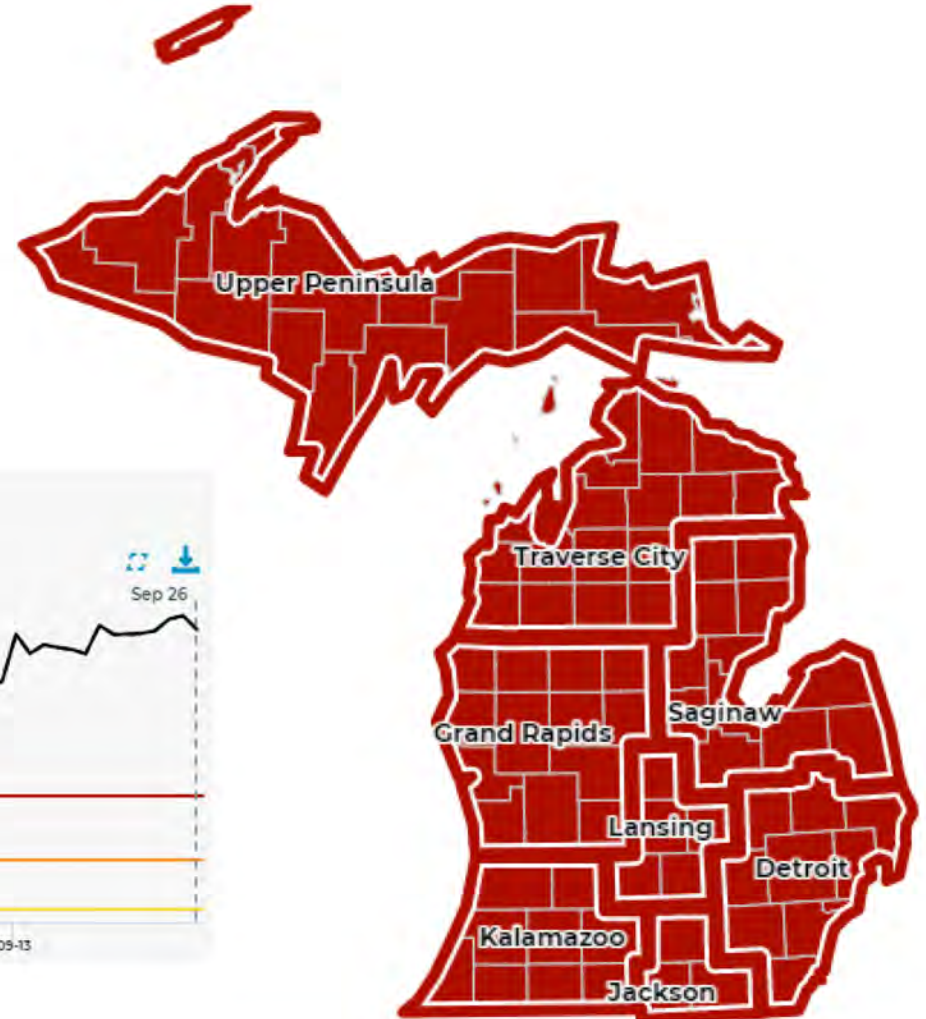
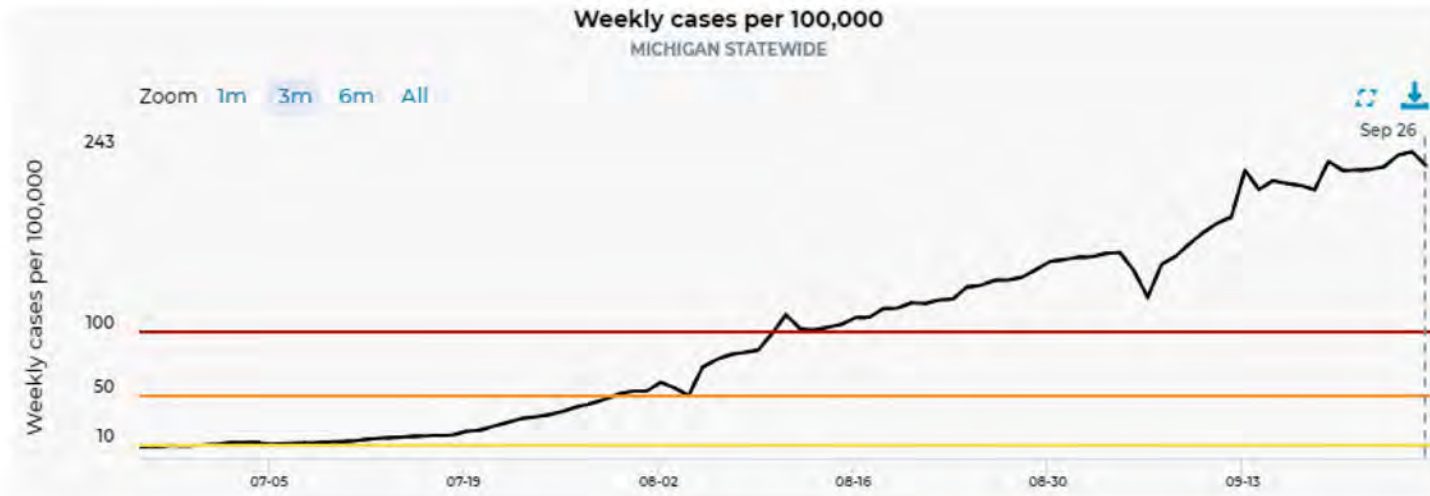
Overview of Michigan

- ▶ Michigan is at High Transmission level
 - ▶ All counties in Michigan are at high transmission level
 - ▶ CDC recommends all individuals, regardless of vaccination status, should mask indoors
- ▶ Statewide positivity is steady at 8.8% (last week: 8.8%)
 - ▶ This is a 9% decline since recent peak on September 12
- ▶ Case rate has increased to 246.3 cases/million (last week: 234.4 cases/million)
 - ▶ Increasing for three months (June 26 low)
 - ▶ 10-19-years-olds are experiencing the greatest case burden (521.0 daily cases; 415.2 cases/mil) while those 0-9 saw largest growth (+10%)
 - ▶ Each day nearly 370 children under age 12 become infected with COVID-19,
 - ▶ 50 more children per day than last week
 - ▶ Daily average pediatric (<18) hospital census is approximately 25
- ▶ Number of active outbreaks is up 9% from last week
 - ▶ 168 new outbreaks were identified in the past week
 - ▶ K-12 reported the most total outbreaks (289) and new outbreaks (105) this week



Michigan at High Transmission Level

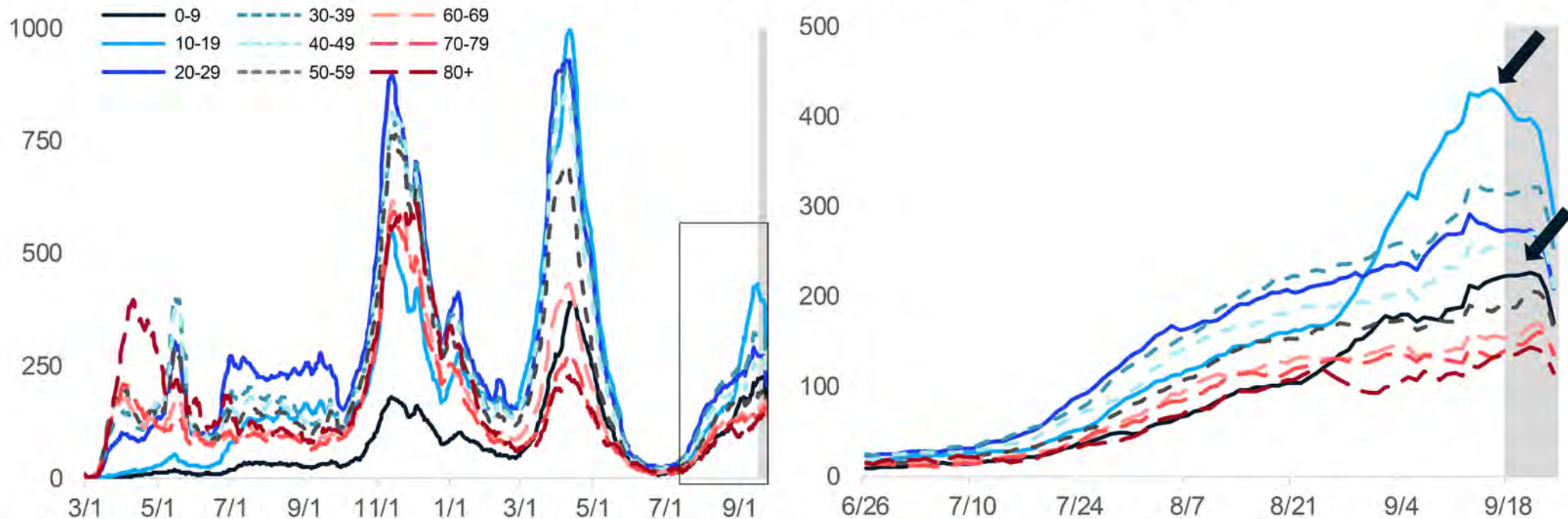
[Dashboard](#) | [CDC](#) | [MI Start Map](#) for most recent data by reporting date



Source: MI Start Map; data through 9/27/2021

Case Rate Trends by Age Group

Daily new confirmed and probable cases per million by age group (7-day rolling average)



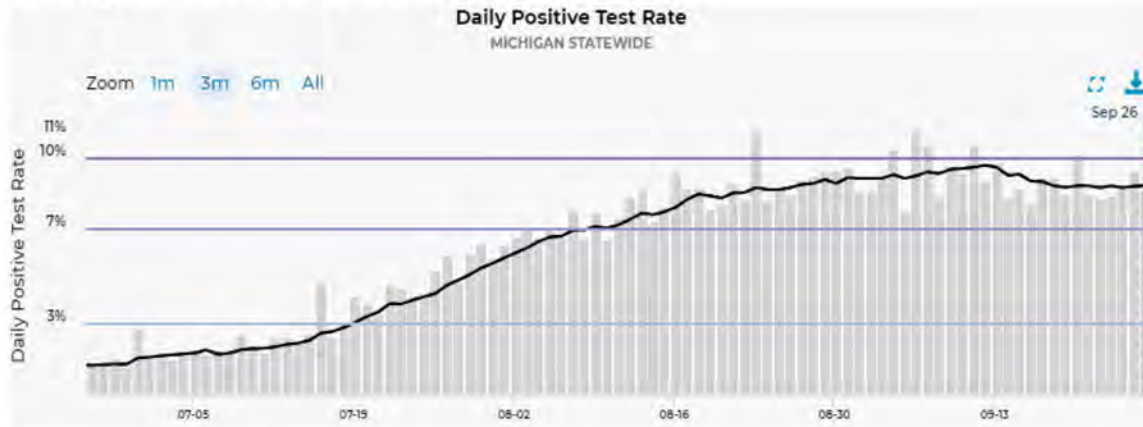
- Case rate trends for all age groups are slowing and are decreasing for some age groups
- Case rates for all age groups are between 130 and 415 cases per million (through 9/20)
- Case rates are highest for **10-19-year-olds** followed by 30-39, 20-29, 40-49, and **0-9**

Note: Case information sourced from MDHHS and reflects date of onset of symptoms
Source: MDHHS – Michigan Disease Surveillance System

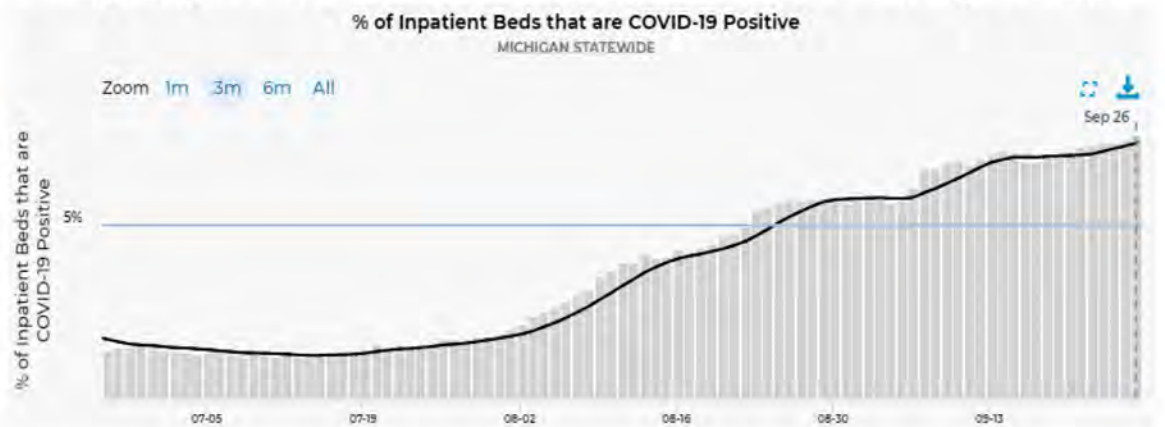
Time Trends – Positivity, Case Rates, Hospitalizations, Deaths

➤ Early indicators show Delta surge may be slowing but burden remains high

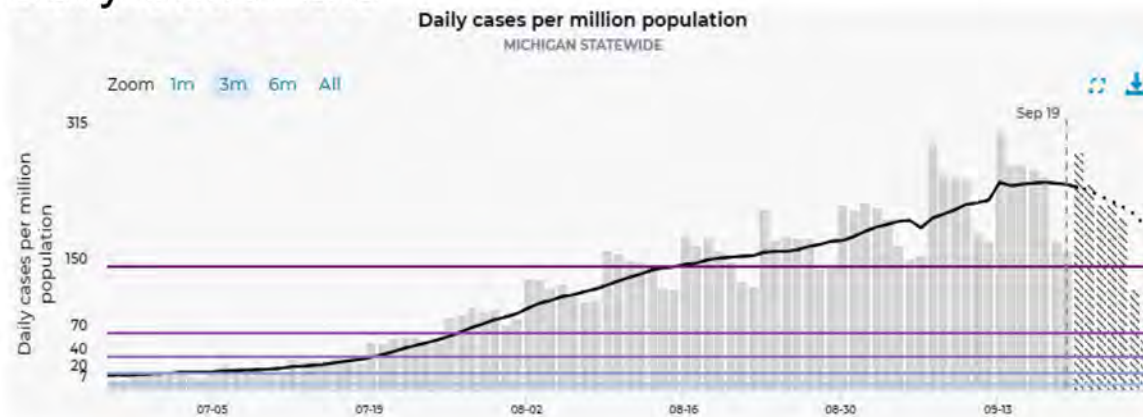
Daily Positive Test Rate



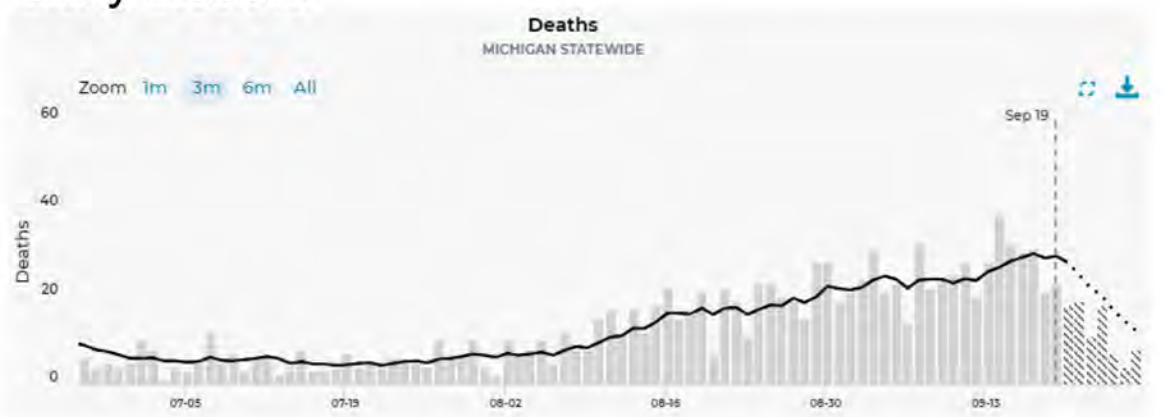
Daily Inpatient Beds Occupied by COVID patients



Daily Case Rate

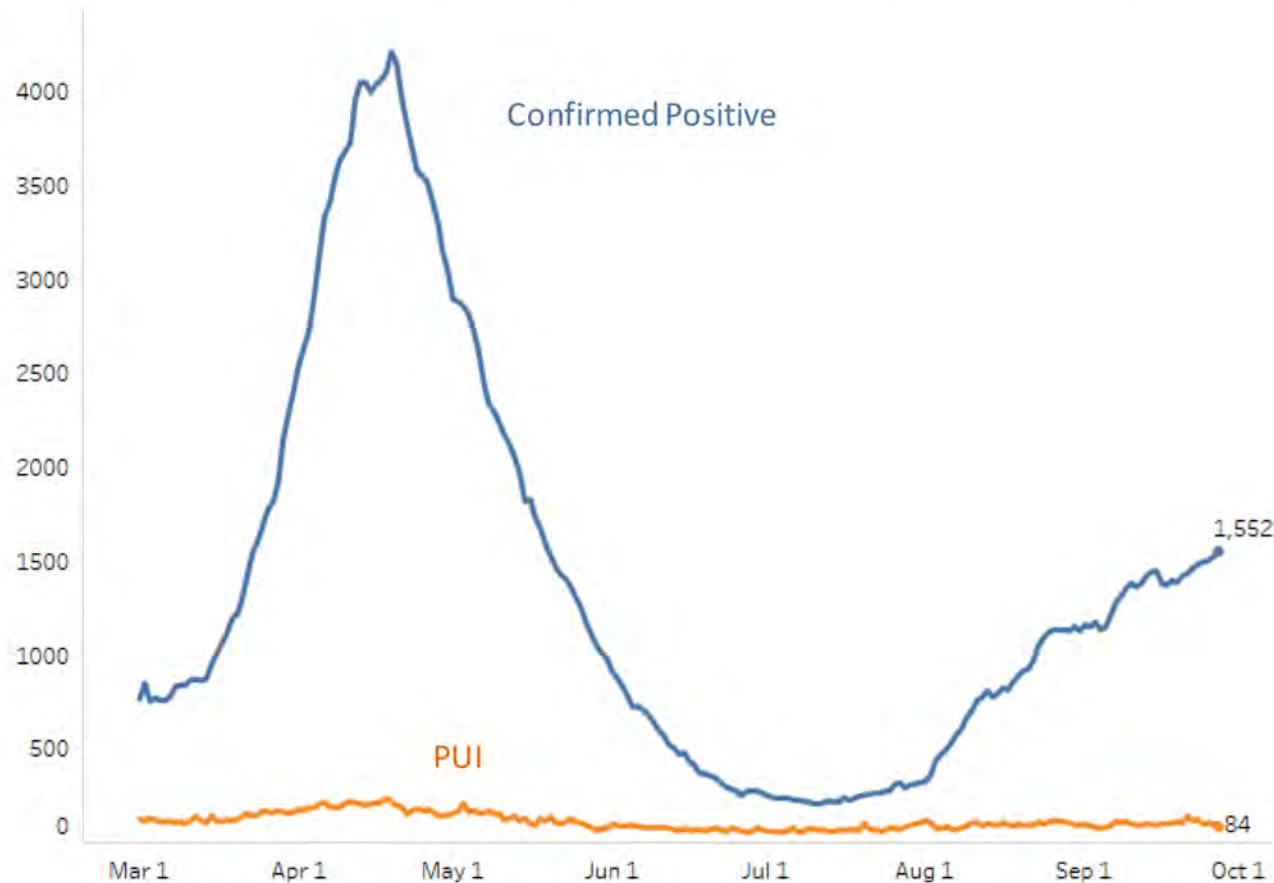


Daily Deaths



Statewide Hospitalization Trends: Total COVID+ Census

Hospitalization Trends 3/1/2021 – 9/27/2021
Confirmed Positive & Persons Under Investigation (PUI)



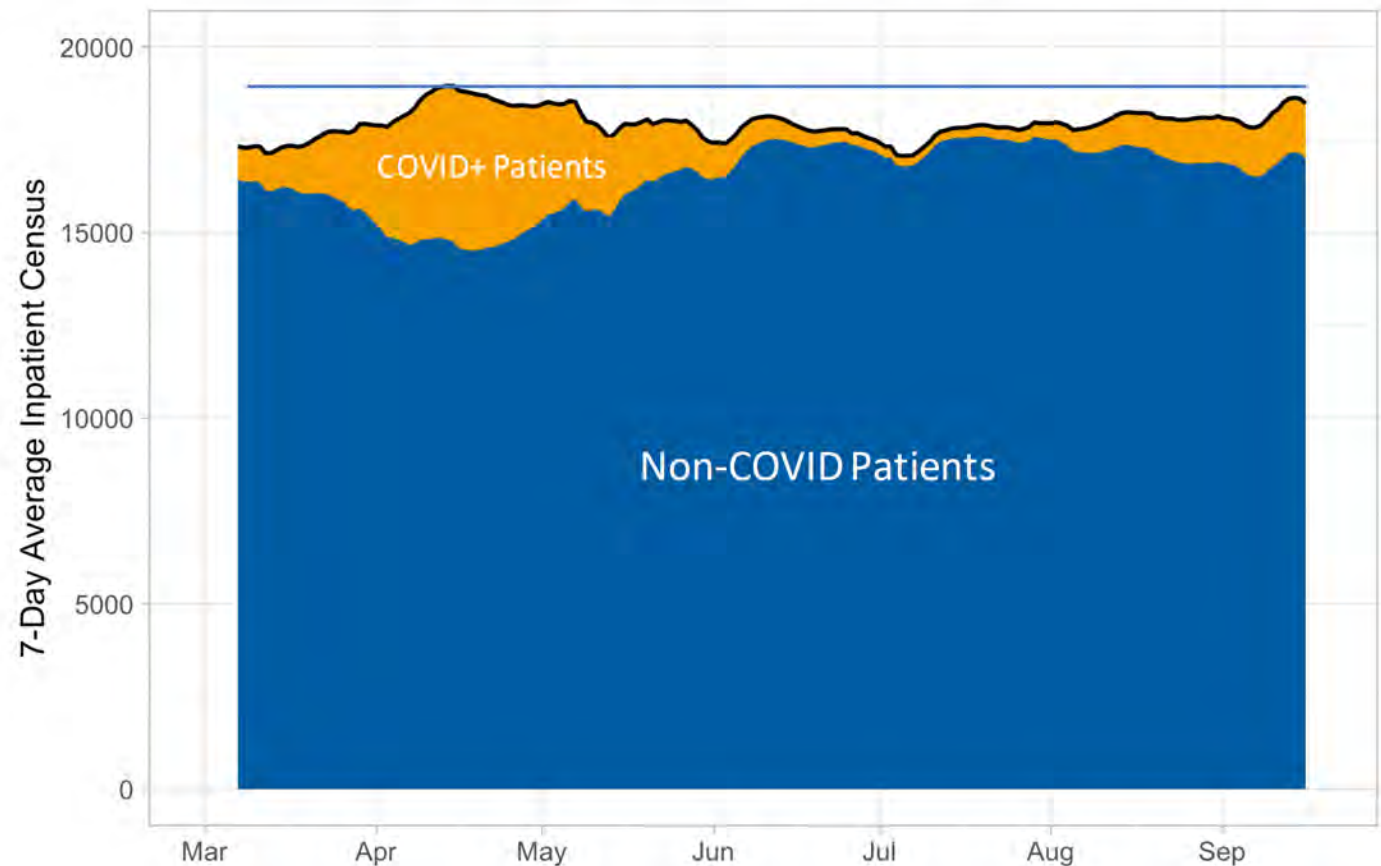
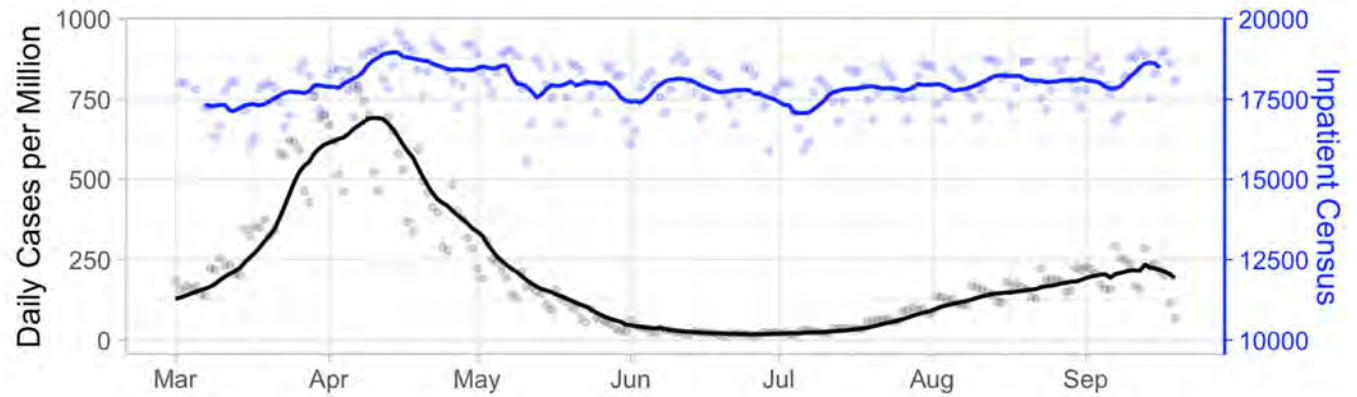
The COVID+ census in hospitals has increased 9% from the previous week.

Hospitalized COVID Positive Long Term Trend (beginning March 2020)



Inpatient census is near spring peak levels

- Cases and COVID+ census have risen, though they are currently lower than spring peak
- However non-COVID care has increased since the spring surge
- Together, the overall inpatient census is near spring peak levels (see horizontal line)



Data Sources: MDSS (case data as of 9/20/21), HHS Protect (hospital [admissions](#) and [inpatient census](#) data through 9/19/2021). Note that COVID+ patient reporting is based on fewer hospitals (~158 hospitals) than overall inpatient census (~161 hospitals), so fraction of patients that are COVID+ may be an underestimate.

Pediatric Data – US, as of September 23, 2021 (from AAP/CHA)

- ▶ To date, children represented 16% of all COVID-19 cases in the US (15.7 % last week)
- ▶ From 9/9/21 to 9/16/21 children represented **26.7%** of all cases in the US (25.7% last week)
- ▶ Over two weeks, 9/9/21 to 9/23/21, there was a 8% increase in the cumulated number of child COVID 19 cases (9% from 9/2/21 to 9/16/21)
- ▶ Among states reporting, children made up between 11.4 to 22% of total cumulated state tests (11.3 to 21.8% last week), and between 5% to 18% of children tested were tested positive (4.9% to 17.9% last week)
- ▶ Among states reporting, children ranged from 1.6% to 4.1% of their total cumulated hospitalizations (1.6% to 4.2% last week), and 0.1% to 2% of all their child COVID-19 cases resulted in hospitalization (same as last week)

SARS-CoV-2 can Negatively Impact Children Directly and Indirectly

- Children can experience severe health outcomes from COVID-19 including MIS-C and Hospitalization
 - Hospitalizations among children nationwide is trending down from all-time highs
 - In Michigan, hospitalizations for those 0-17 years are not at all-time highs but are increasing since July

United States Hospital Admissions | 0 - 17 years



Note: Gray bar indicates lag period where data may be updated

Michigan Hospital Admissions | 0 - 17 years





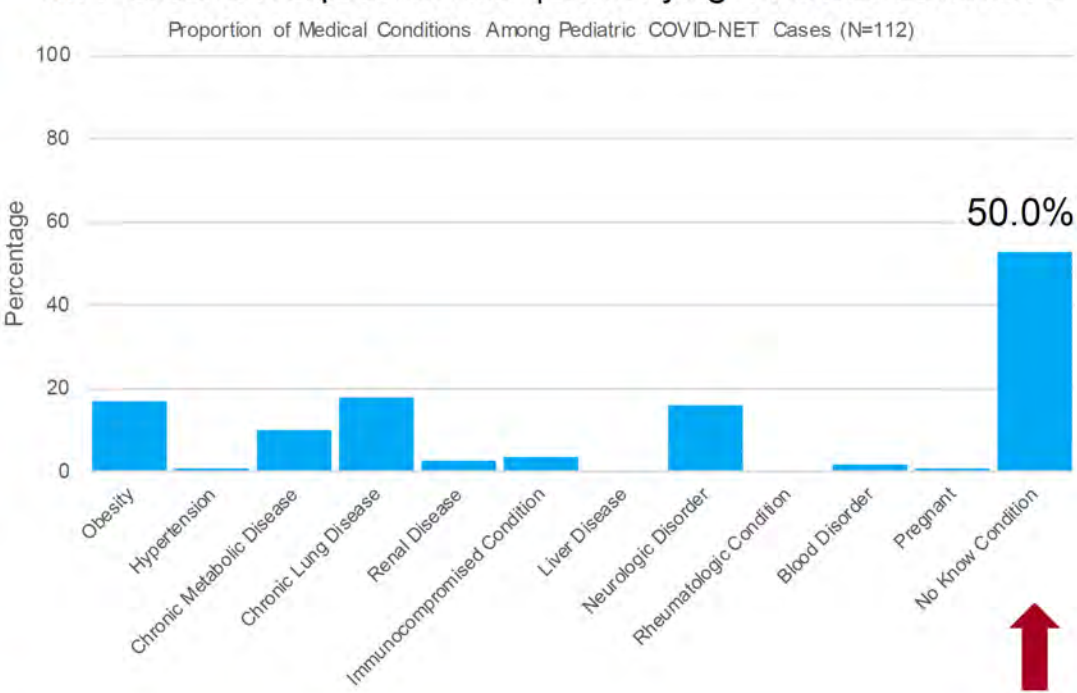
SARS-CoV-2 can Negatively Impact Children Directly and Indirectly

- Children can experience severe health outcomes from COVID-19 including MIS-C and Hospitalization
 - Nationally, nearly half of children hospitalized have no reported underlying conditions[†]
 - In Michigan, 50% of children hospitalized have no reported underlying conditions

U.S. Pediatric Hospitalizations | Underlying Medical Conditions



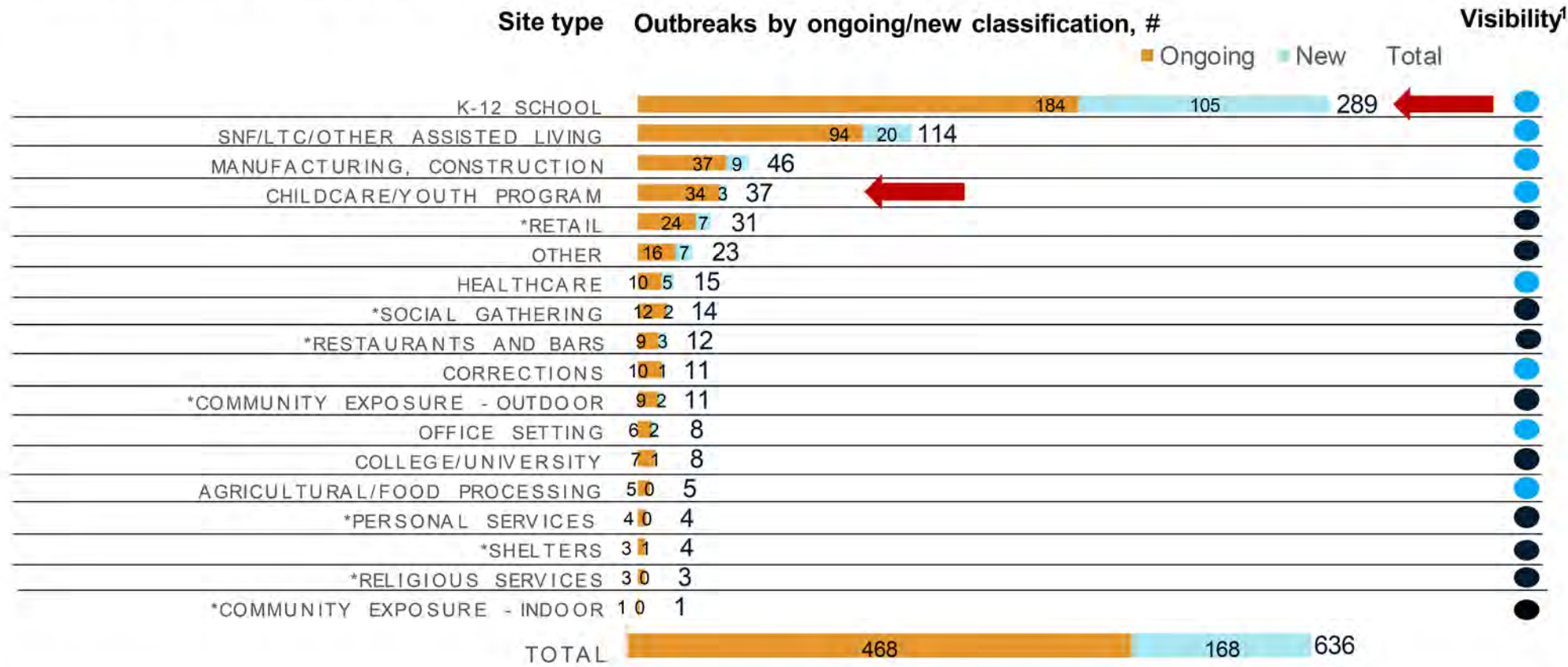
MI Pediatric Hospitalizations | Underlying Medical Conditions



Sources: *[CDC COVID Data Tracker > New Hospital Admissions](#); † [COVIDNET](#)

Number of Outbreaks Reported has Increased

Number of outbreak investigations by site type, week ending Sep 23



- Easier to identify outbreak
- Harder to identify outbreak

Total number of active outbreaks is **up 9%** from previous week

K-12 schools reported the greatest number of new outbreaks (105) this week, and there were an additional 3 new outbreaks in childcare and youth programs for a total of 108 outbreaks in settings primarily with 0-19-year-olds. (64% of all known new outbreaks)

The next greatest number of new outbreaks was among SNF/LTC (20), followed by manufacturing/construction (9), retail and other (7 each), and nine other settings with at least 1 new outbreak in the last week.

1. Based on a setting's level of control and the extent of time patrons/residents spend in the particular setting, different settings have differing levels of ability to ascertain whether a case derived from that setting

NOTE: Many factors, including the lack of ability to conduct effective contact tracing in certain settings, may result in significant underreporting of outbreaks. This chart does not provide a complete picture of outbreaks in Michigan and the absence of identified outbreaks in a particular setting in no way provides evidence that, in fact, that setting is not having outbreaks.

K-12 school outbreaks, recent and ongoing, week ending Sep 23

Number of reported outbreaks increased since last week (218 to 289), including increases in High Schools (88 to 107), Middle/Jr High (46 to 68), and Pre K-Elementary (79 to 110). Only Administrative declined (5 to 4).

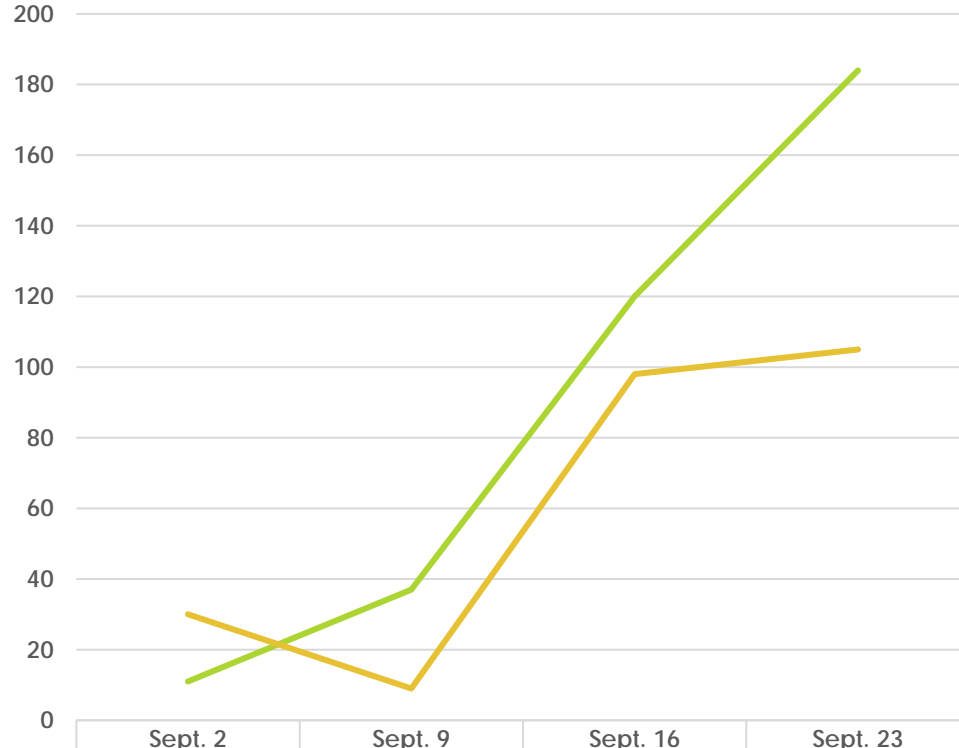
Region	Number of reported cases, #	# Ongoing - Excluding New	# New	Number of outbreaks	Range of cases per outbreak
Region 1	234	72		58	2-18
Region 2n	50	59		27	2-20
Region 2s	101	50		26	2-19
Region 3	365	175		70	2-42
Region 5	116	9		22	2-31
Region 6	194	133		47	2-44
Region 7	46	17		12	3-12
Region 8	113	95		27	2-29
Total	1,219	610		289	2-44

Grade level	Number of reported cases, #	# Ongoing - Excluding New	# New	Number of outbreaks	Range of cases per outbreak
Pre-school - elem.	349	255		110	2-32
Jr. high/middle school	261	140		68	2-16
High school	596	213		107	2-44
Administrative	3	2		4	2-9
Total	1,219	610		289	2-44

Many factors, including the lack of ability to conduct effective contact tracing in certain settings, may result in significant underreporting of outbreaks. This chart does not provide a complete picture of outbreaks in Michigan and the absence of identified outbreaks in a particular setting in no way provides evidence that, in fact, that setting is not having outbreaks.

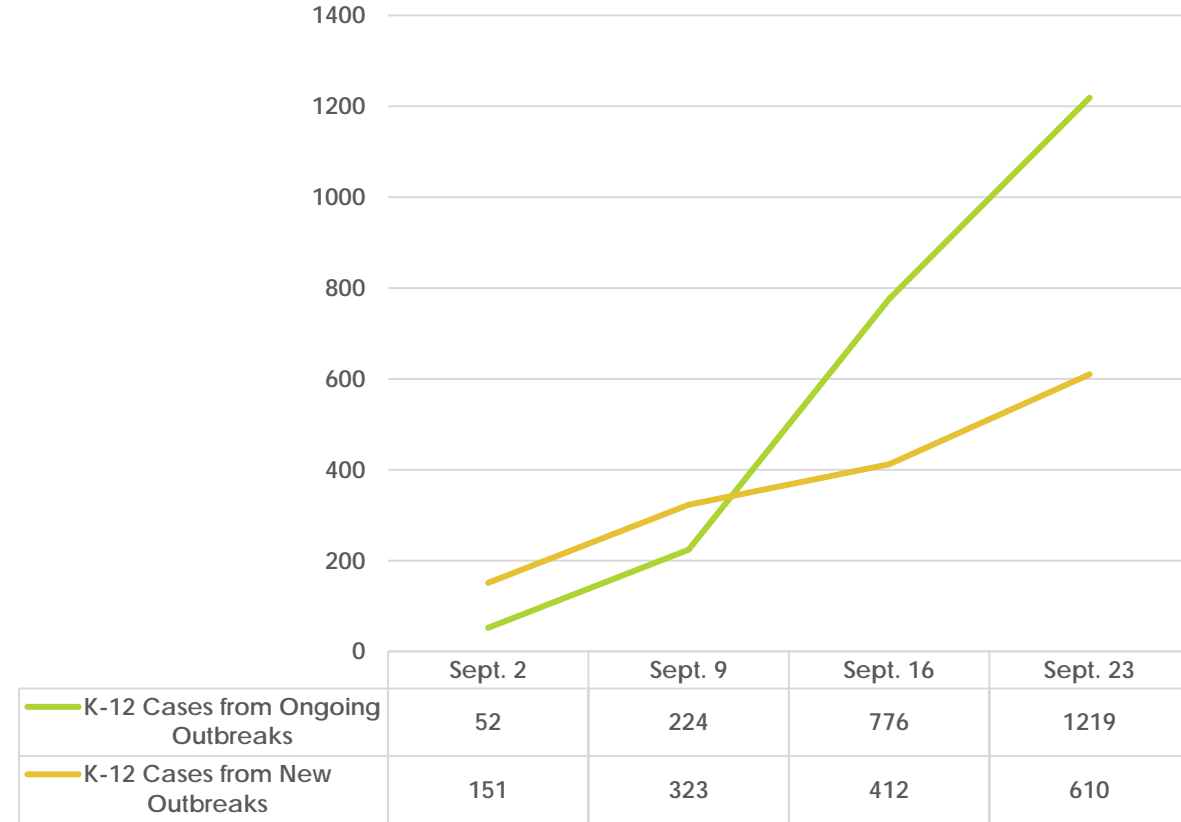
Source: LHD Weekly Sitreps

Number of K-12 Outbreaks



— K-12 Ongoing Outbreaks — K-12 New Outbreaks

Number of Cases in K-12 Outbreaks



— K-12 Cases from Ongoing Outbreaks — K-12 Cases from New Outbreaks

Definition of Educational Outbreak can be found [here](#).

Ongoing outbreaks are those that had already been identified in previous weeks but have had at least one new associated case reported to the local health department in the last 28 days.



Potential COVID-19 Vaccination Breakthrough Cases

Michigan part of CDC's nationwide investigation ([COVID-19 Breakthrough Case Investigations and Reporting | CDC](#))

Michigan Data (1/1/21 through 9/21/21):

- **30,867 cases met criteria based on a positive test 14 or more days after being fully vaccinated**
- **Less than 1% of people who were fully vaccinated met this case definition**
 - **Includes 417 deaths (368 in persons ages 65 years or older)**
 - **1,211 cases were hospitalized**
- Vaccine breakthrough cases are expected. COVID-19 vaccines are effective and are a critical tool to bring the pandemic under control; however, no vaccine is 100% effective at preventing illness. Some fully vaccinated people will get sick, and some will even be hospitalized or die from COVID-19. However, there is evidence that vaccination may make illness less severe for those who are vaccinated and still get sick. The risk of infection, hospitalization, and death are all much lower in vaccinated people compared to unvaccinated.
- More than 181 million people in the United States have been fully vaccinated as of September 20, 2021. CDC is monitoring these cases among vaccinated persons and evaluating trends in order to better understand who is at risk for severe COVID-19 following vaccine breakthrough infection. Vaccinated people have also experienced asymptomatic infections.
- Current data suggest that COVID-19 vaccines authorized for use in the United States offer protection against most SARS-CoV-2 variants circulating in the United States.

Cumulative COVID-19 Cases by Vaccination Status, Michigan, Jan 15 – Sep 21

Fully Vaccinated People (4,853,633)		
Cases	Hospitalization	Deaths
Percent of Cases In People Not Fully Vaccinated (469,291 / 500,158) 93.8%	Percent of Hospitalizations In People Not Fully Vaccinated (12,980 / 14,191) 91.5%	Percent of Deaths In People Not Fully Vaccinated (5,311 / 5,728) 92.7%
469,291 Total Cases Not Fully Vaccinated	12,980 Total Hospitalized Not Fully Vaccinated	5,311 Total Deaths Not Fully Vaccinated
Total Breakthrough Cases 30,867	Total Breakthrough Hospitalizations 1,211	Total Breakthrough Deaths 417
0.636% Percent of Fully Vaccinated People who Developed COVID-19 (30,867 / 4,853,633)	0.025% Percent of Fully Vaccinated People Who Were Hospitalized for COVID-19 (1,211 / 4,853,633)	0.009% Percent of Fully Vaccinated People Who Died of COVID-19 (417 / 4,853,633)
6.2% Percent of Cases Who Were Fully Vaccinated (30,867 / 500,158)	8.5% Percent of Hospitalizations Who Were Fully Vaccinated (1,211 / 14,191)	7.3% Percent of Deaths Who Were Fully Vaccinated (417 / 5,728)
Total Cases: 500,158	Total Hospitalizations: 14,191	Total Deaths: 5,728

Michigan Disease Surveillance System may underestimate the frequency of COVID-19 hospitalizations:

- Case investigation and follow-up is more difficult for individuals who get vaccinated (e.g., they are too ill to speak to investigators, don't answer their phone, or otherwise).
- These hospitalizations include individuals who are hospitalized for issues other than COVID-19 (the same as breakthrough COVID-19).
- Individuals who get hospitalization will lag after infection and may occur after case investigation.

THANKS FOR
JOINING US!
ANY
QUESTIONS?

Contacts:

Jen Morse, MD, MPH, FAAFP

jmorse@cmdhd.org

Cell: 989-802-2590

For Roscommon, Osceola, Clare, Gladwin, Arenac, Isabella Counties:

Steve Hall, R.S., M.S.

shall@cmdhd.org

989-773-5921, Ext. 1421

www.cmdhd.org

**For Missaukee, Crawford, Kalkaska, Wexford, Lake, Mason, Manistee,
Oceana, Newaygo, Mecosta Counties:**

Kevin Hughes, MA

khughes@dhd10.org

(231) 876-3839

www.dhd10.org

For Montcalm, Gratiot, Clinton Counties

Liz Braddock MS, RS

Cell: 616 302 6301

lbraddock@mmdhd.org

www.mmdhd.org